

Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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This Issue in Brief...

RECENT OCCUPATIONAL TRENDS IN THE UNITED STATES (p. 139) traces the shifts in the relative importance of the types of jobs men and women held during the war and reconversion periods. Hitherto unpublished Census data and other information indicate that in general those jobs which had rapid wartime expansion (operatives, clerks, service workers) declined in relative importance between 1945 and 1947; certain other groups (professionals, sales people, nonfarm laborers) diminished in importance during the war but in the two subsequent years recovered to some extent. Agricultural jobs declined during the war and kept on declining; but managerial, proprietary, and skilled posts still are expanding. The implications of these shifts in terms of distribution of labor force skills and of trends in earnings and wages are important.

Important too is the effect of war and reconversion on wages and prices in foreign countries, the subject of a current series of articles in the Review. In the July issue, wages, rations, and prices in the Soviet Union were discussed. In September, the series is to be continued with an analysis of wage structure in Great Britain. The article FRANCE: WAGE TRENDS AND WAGE POLICIES, 1938-47 (p. 149), discloses a narrowing of the historical differentials between the wage rates of skilled and unskilled workers and between men and women. Similarly, the differences between high- and low-paid jobs and between Paris and the Provinces have tended to become less pronounced. Real earnings at the beginning of 1947 had shrunk to a point below prewar levels, although gross earnings including family allowances were 5 to 8 times higher.

Guaranteeing employment for a year is in one sense a method of guaranteeing an annual wage. One such system—and the only such plan in the railroad industry—is described in the article GUARANTEED EMPLOYMENT PLAN ON THE SEABOARD RAILROAD (p. 167). Since 1928, as a result of a collective agreement between the company and the Federated Shop Crafts, an average minimum work force of about 2,500 repair and equip-

ment maintenance workers have year-round employment security. The plan is jointly administered, according to the union-management agreement.

Union-management agreements were the stock-in-trade of the U. S. CONCILIATION SERVICE, 1913-47 (p. 172). On August 21, 1947, the functions of that agency of the Department of Labor, under the terms of the Labor Management Relations Act of 1947, were transferred to the newly created Federal Mediation and Conciliation Service. This article reviews some of the pioneering work and the history of the Service. Doubtless some of the types of agreements negotiated by the Conciliation Service may be included in the discussion on UNION AGREEMENTS: POWER LAUNDRIES AND CLEANING AND DYEING (p. 158). The past decade has witnessed most of the union organizational work which has occurred in these industries. Today between 35 and 40 percent of their workers are employed under conditions established by collective agreement. The article analyzes the agreements with respect to such items as union recognition, wages, hours of work, vacations, holidays, sick leave, seniority, welfare plans, grievance procedure, and health and safety.

Health and safety factors in another industry are discussed in WORK INJURIES AND ACCIDENT CAUSES IN PULPWOOD LOGGING, 1944 (p. 175). As compared with the injury-frequency rate for all manufacturing industries of 18.4, workers in pulpwood logging experienced a rate 4 times as great. Contrary to the general impression, pulpwood logging, according to the results of the survey on which the article is based, is fully as hazardous as the production of saw logs. The frequency rate for each type was slightly in excess of 75 disabling injuries per million man-hours worked. Injury-frequency rates varied considerably from region to region, reflecting differences in operating methods. The Great Lakes area was high with about 83. The Northeastern States had the best record with 70. About 1 in every 7 pulpwood loggers received a disabling injury in 1944 as compared with 1 in 24 for all manufacturing. Accident prevention in logging is handicapped by the limited degree of control that management can exercise over tools, materials, and work areas. Many of the unsafe conditions are due to weather and terrain.

The Labor Month in Review

THE PRICE LULL that persisted through the spring of 1947 was broken in June and July by increases in a number of crucial prices. The effect of these has begun to work its way into the economy.

Coal prices advanced 65 cents to \$1.25 a ton at wholesale following the wage increase. Although the dollars-and-cents cost of the new wage and overtime provisions cannot be estimated precisely until actual hours of work are known, preliminary reports indicate that total output of coal may be only slightly less for the 8-hour day than it was for the 9-hour day.

A general rise in steel prices, ranging from \$5 to \$10 a ton on various products, was announced by major producers late in July. This was attributed to an accumulation of increased costs, including coal prices, steel wages, and a very sharp rise in scrap prices. However, the largest producer based the price increase specifically on factors other than the increase in coal prices, and indicated that further adjustment may be necessary later.

Corn prices reached a new peak early in July but receded somewhat in the latter part of the month as later crop reports offered prospects of some improvement in supply. The higher price levels affected other grains and feed, and through them livestock, meat, and dairy products. As a result, agricultural prices in primary markets in July were generally higher and approximated March peaks. Raw cotton also rose to a new peak during July.

In mid-July average wholesale prices broke through the narrow range within which they had fluctuated since March and rose to the highest point since 1920. The increases were widespread, although particularly marked for agricultural commodities; prices of commodities other than farm and food also increased; but only the first of the coal increases and none of the new steel

prices were then included. The fluctuations within the price level during the spring were characterized by a succession of peaks and recessions of individual commodities and commodity groups, with the result that in July most groups were somewhat below their peaks although the composite index was at a new high. Only metals and fuels were higher in July than at any previous time in 1947.

Consumers' Prices Reach New Peak

Consumers' prices also broke through to a new high in June, largely as the result of increased meat prices. All major items were higher except rent. Retail foods reached a record high. Current increases in rent, under the new rent-control law, and in fuels and metal products are yet to be felt in the consumers' price index.

The strength of demand generally, and for foods and durable goods particularly, places producers under little pressure to absorb major cost increases into the existing price schedules at the expense of profits. Many important users of steel, and of some other basic materials that have advanced in price, are now reexamining their cost structure before making further price commitments. While there is little likelihood of a repetition of the steep advances of the latter half of 1946, persistent consumer and investment demand, buoyed by extraordinary exports, afford the opportunity for widespread, though moderate, price increases.

Wages Continue to Rise

Wages also rose in June, but considerably less than in May, when the main effect of the "second round" of postwar wage increases was felt in such industries as steel, automobiles, and electrical equipment. Preliminary data on weekly earnings of all manufacturing indicate a rise between May and June of from \$48.46 to \$48.91 or by 0.9 percent. Since weekly hours remained unchanged at 40.1, the increase in weekly earnings was due entirely to an increase in average hourly earnings.

Practically all of the wage increase occurred in the durable-goods group—particularly in iron and steel, furniture, lumber, and machinery—reflecting the effect of the spread of the "second round." Weekly earnings in the nondurable manufacturing industries, which had generally secured their

"second round" increases earlier, rose by only 0.3 percent. The July wage agreement in the coal-mining industry (discussed in the July issue of the Review) was the most significant wage development in the nonmanufacturing group.

The major wage question emerging in July was whether a new spurt in living costs would lead to further wage demands. Since most of the contracts in industries employing large numbers of workers are not subject to reopening until the late fall and winter of 1947 or the spring of 1948, the answer was not immediately evident. Two slight straws in the wind were the request of the United Rubber Workers (CIO), which had gained an 11½-cent hourly increase in March, for an additional increase, and the 5-cent agreement negotiated by United Textile Workers of America (CIO) with a group of northern textile concerns, reversing a prior declaration of the union that it would not seek further wage increases.

Industrial Peace Continues

Except for a brief walk-out of coal miners and the prolonged strike of East Coast shipyard workers, there were no major disturbances in the industrial relations scene. Fewer work stoppages occurred in June than in each of the two preceding months and no large-scale disputes began in July (see p. 203) to alter the general picture. Negotiations in the railroad industry, which had been going on since May, approached a peaceable solution when the carriers and their nonoperating employees agreed to submit their dispute to final and binding arbitration by a 6-man board. AFL seamen reached agreement with East Coast and Gulf shipping companies replacing a contract which was to have expired September 30. A threatened strike in the Ford Motor Co. was averted when the parties agreed to appoint a joint committee to prepare a contract clause on the question of union strike liability and the company agreed not to file strike damage suits under the Labor Management Relations Act of 1947 pending study of the matter.

Man-days of idleness due to work stoppages during the first 6 months of 1947 represented 0.5 percent of estimated working time for all industries as contrasted to 2.4 percent during the same period in 1946.

Spurt in New Housing

An unexpected contra-seasonal rise in the number of new dwelling units started in June brightened construction prospects. Starts in June totaled 75,000, an increase of 2,500 from the April-May level, and the highest reached since the 1920's. The upturn raised hopes of meeting the newly revised housing goals. In view of the extreme shortage of rental housing, the increase in starts of multidwelling units was particularly encouraging. The lifting of almost all remaining controls on nonresidential construction early in July led to optimistic outlook also for industrial and commercial building. No immediate increase in new building was reported, however.

Employment at Record Levels

Employment remained at seasonally high levels in June and July. The prolonged slackening of demand for labor in nondurables manufacturing seemed to have reached its seasonal low and showed no signs of spreading to other industries; but, even allowing for seasonal and other short-term influences, there is some reason to believe that factory employment has passed its peak. Nevertheless, extraordinarily high nonmanufacturing employment raised the total to record levels.

Total employment in July, as in June, exceeded the 60 million mark. A seasonal dip of 300,000 in agricultural employment was offset by an equivalent rise in nonagricultural employment. The unemployment total remained practically unchanged at about 2½ million.

The supply of labor continued adequate, even in the face of unprecedented demands. Seasonal requirements were met by new entrants, both permanent and temporary, at the beginning of summer. Except for seasonal demands, labor requirements are largely limited to replacements. Hiring rates declined slowly during the spring, and are now lower than in any year since 1940, taking into account seasonal fluctuations. Few industries report anticipated increases in employment.

Employment of women in manufacturing declined, reflecting the immediate effects of curtailed activity in light industries. Beyond this, there is evidence of continued gradual replacement of women by men in most manufacturing industries, particularly in durable goods. Nevertheless, women still hold more factory jobs than they did before the war (see p. 144).

Recent Occupational Trends

Wartime and Postwar Trends Compared: An Appraisal of the Permanence of Recent Movements

HAROLD WOOL AND LESTER M. PEARLMAN¹

CONVERSION OF AMERICAN INDUSTRY to war production and subsequent reconversion to the needs of a peacetime economy—all within the span of 7 years—brought unprecedented occupational shifting of men and women. During the course of World War II, the induction of millions of men into the armed forces was paralleled by large movements of workers within the civilian economy, from industry to industry and from one type of job to another. Most pronounced in the wartime shifts, was the great influx to industrial jobs, as operatives or craftsmen, from a wide range of other pursuits. Large gains were also recorded in the clerical and administrative groups and in the service occupations. In addition, the war opened up extensive opportunities for promotion into more skilled and more attractive jobs within broadly related occupational fields: large numbers of operatives moved up into the craftsmen group; clerical workers became managers or officials; farm laborers became farm owners or managers.

In the 2 years following the end of the war, many of the wartime occupational movements were reversed. About 11 million veterans found civilian jobs and other millions of workers transferred from war jobs to production of peacetime goods and services. In general, occupations which had expanded rapidly during the course of the

war—operatives, clerical, service workers—declined in relative importance, while other groups—professionals, sales workers and nonfarm laborers—recouped some of their wartime losses. Notable exceptions to this tendency occurred in the proprietor and official and skilled craftsmen groups, which expanded during the war and continued to rise in the postwar periods, and in the agricultural occupations, which continued to decline in importance.

With reconversion completed, it is possible to appraise the more lasting effects of recent occupational movements. A number of far-reaching changes evolved in the course of 7 years, partly as a result of achieving record levels of employment and income, partly as a continuation of long-term trends, and partly as a result of the war. An examination of the occupational distribution in 1947, in the light of these changes, provides an insight into the prospects of growth for broad groups of occupations.

Wartime Movements

Mobilization of the Nation's manpower for war resulted in a striking expansion of total employment. In the spring of 1940, prior to the start of the national defense program, there were about 46 million persons in civilian jobs and about half a million in the armed forces. Five years later, on the eve of victory in Europe, civilian employ-

¹ Of the Bureau's Occupational Outlook Division.

ment had risen to 53½ million; the net strength of the armed forces had mounted to a peak of over 12 million men and women.

An extensive reshuffling of workers within the civilian economy accompanied the over-all rise in employment. Employment in the munitions manufacturing industries (including metals, chemicals, and rubber) and in the Federal war agencies increased by 7 million in the course of the war; other fields, such as agriculture, construction, and trade, barely held their own or lost ground.

The realignment of industry for war production caused marked shifts in demand for persons having certain occupations and skills. Industrial workers (i. e., craftsmen and operatives, who comprise the bulk of factory wage earners) experienced the

greatest increase, with a net gain of about 5 million. These occupations accounted for over 35 percent of total civilian employment in April 1945, as against less than 30 percent in 1940 (see table 1 and chart).

The increase in administrative work associated with the wartime expansion also caused sharp increases in two groups of "white collar" workers. Employment of clerical workers rose by 2 million, or about two-fifths; the proprietor and managerial group showed a gain of about 750,000.

Service occupations, excluding domestics, gained moderately in relative importance during the war. The wartime shifts in spending—occasioned by shortages of many types of consumer goods as well as by changed living habits—were reflected in a

TABLE 1.—Employed workers classified by major occupation group and by sex, April 1940, 1945, and 1947¹

Major occupation group	Total			Males			Females		
	1940 ²	1945	1947	1940 ²	1945	1947	1940 ²	1945	1947
Number (in thousands)									
Total employed.....	46, 100	53, 650	56, 700	34, 180	34, 340	40, 900	11, 920	19, 310	15, 800
Professional and semiprofessional workers.....	3, 460	3, 250	3, 860	1, 890	1, 740	2, 320	1, 570	1, 510	1, 540
Proprietors, managers, officials (except farm).....	3, 840	4, 590	5, 760	3, 390	3, 790	4, 980	450	800	780
Farmers, farm managers, foremen, and laborers.....	8, 610	8, 620	7, 720	7, 920	6, 690	6, 810	690	1, 930	910
Clerical workers.....	4, 810	6, 970	7, 050	2, 280	2, 070	2, 920	2, 530	4, 900	4, 130
Sales workers.....	2, 980	2, 660	3, 310	2, 150	1, 220	1, 990	830	1, 440	1, 320
Craftsmen, foremen, and kindred workers.....	5, 150	6, 820	7, 530	5, 040	6, 520	7, 370	110	300	160
Operatives and kindred workers.....	8, 520	12, 050	12, 170	6, 330	7, 440	8, 750	2, 190	4, 610	3, 420
Domestic service workers.....	2, 240	1, 780	1, 830	140	110	140	2, 100	1, 670	1, 690
Service workers, except domestic workers.....	3, 370	4, 140	4, 060	2, 020	2, 160	2, 290	1, 350	1, 980	1, 770
Laborers, except farm.....	3, 120	2, 770	3, 410	3, 020	2, 600	3, 330	100	170	80
Percentage distribution									
Total employed.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Professional and semiprofessional workers.....	7. 5	6. 1	6. 8	5. 5	5. 1	5. 7	13. 3	7. 8	9. 7
Proprietors, managers, officials (except farm).....	8. 3	8. 6	10. 2	9. 9	11. 0	12. 2	3. 8	4. 1	4. 9
Farmers, farm managers, foremen, and laborers.....	18. 6	16. 0	13. 6	23. 3	19. 5	16. 7	5. 7	10. 0	5. 8
Clerical workers.....	10. 4	13. 0	12. 4	6. 7	6. 0	7. 1	21. 2	25. 4	26. 1
Sales workers.....	6. 5	5. 0	5. 8	6. 3	3. 5	4. 9	7. 0	7. 5	8. 4
Craftsmen, foremen, and kindred workers.....	11. 2	12. 7	13. 3	14. 7	19. 0	18. 0	. 9	1. 5	1. 0
Operatives and kindred workers.....	18. 5	22. 4	21. 5	18. 5	21. 7	21. 4	18. 4	23. 9	21. 7
Domestic service workers.....	4. 9	3. 3	3. 2	. 4	. 3	. 3	17. 6	8. 6	10. 7
Service workers, except domestic workers.....	7. 3	7. 7	7. 2	5. 9	6. 3	5. 6	11. 3	10. 3	11. 2
Laborers, except farm.....	6. 8	5. 2	6. 0	8. 8	7. 6	8. 1	. 8	. 9	. 5

¹ Estimates of employment by occupation for April 1940 and April 1945 were adjusted to be consistent with revised Census totals of agricultural and nonagricultural employment.

Estimates subsequent to 1940 are subject to sampling variation which may be large in cases where the quantities shown are relatively small.

² Approximately 400,000 employed workers whose occupations were not reported were apportioned according to the distribution of those whose occupations were reported.

SOURCE: United States Bureau of the Census and Bureau of Labor Statistics.

great expansion in the demand for service workers in hotels, restaurants, amusement places, and the like. As a result, the number employed in these occupations rose by almost 800,000 between 1940 and 1945, despite the extremely tight labor market.

The gains in war-expanded occupations were partly offset by reduced employment in other lines

of work. For example, the number of professional workers dropped by 200,000 over the 5-year period. With training of many young people interrupted during the war years, the inflow of entrants into most professional fields was insufficient to replace the losses caused by death and retirement, withdrawals to the armed forces, and shifts to higher-paying nonprofessional lines of work. Notable

exceptions were the technical professions—engineering, chemistry, and allied fields—in which emergency training programs permitted a large inflow to meet wartime needs.

Sizable employment declines were also reported among salespeople, domestic servants, and unskilled laborers; the number of farm workers remained virtually unchanged.

OCCUPATIONAL SHIFTS

These changes in over-all occupational distribution, though substantial, tend to conceal the vast amount of shifting by individual workers during the war years. Data on the nature and size of these occupational shifts among men and women in the wartime labor force are available from a special survey conducted by the United States Bureau of the Census in connection with the Monthly Report on the Labor Force. All persons employed in March 1944 were asked to state their occupation during that month, as well as the occupation they followed during the week before Pearl Harbor. The resulting cross-classification reveals the shifts among occupational groups under the impact of the war.

Men Workers: Between the eve of Pearl Harbor and March 1944, almost 6 million men—roughly 1 out of every 5 employed on both dates—moved from one broad occupational group to another.² The proportion of men showing a change varied significantly among occupational groups, as shown in the accompanying tabulation.

As might have been expected, stability was greatest in the professional and semiprofessional group. More than 90 percent of the men engaged in that field were still in it in March 1944. The proportion of men who shifted fields was inversely related to the degree of skill and relative attractiveness of the occupation. It was higher among the proprietor and managerial occupations, still higher among industrial workers as well as clerks and service workers, and highest among laborers—both on the farm and in the factory.

Most pronounced, in the pattern of occupational shifts, was the movement into the war factories

² This is exclusive of numerous shifts within the major occupational groups, and moreover does not take account of the fact that many men changed occupations more than once during this period.

Occupation at time of Pearl Harbor	Men changing occupation group, Pearl Harbor to March 1944	
	Number (in thousands)	Percent of total employed men
Total, all occupations.....	5, 860	19. 3
Professional and semiprofessional workers.....	140	8. 8
Proprietors, managers, and officials.....	500	13. 9
Farmers and farm managers.....	660	15. 0
Craftsmen, foremen, and kindred workers.....	930	15. 4
Operatives and kindred workers.....	1, 160	19. 1
Clerical, sales, and kindred workers.....	720	21. 5
Domestic and other service workers.....	430	23. 3
Farm laborers.....	660	36. 3
Laborers (except farm).....	660	36. 5

SOURCE: Based on unpublished data from the Monthly Report of the Labor Force, United States Bureau of the Census.

from a wide range of other pursuits. From the clerical and sales group alone, fully a half million men (a fourth of the total employed in these occupations at the time of Pearl Harbor) had shifted to jobs as operatives or craftsmen by March 1944. Even greater proportions were drawn from other occupations, particularly laborers and service workers; sizable numbers were also recruited from among the proprietor and managerial group, and from among farmers.

Women Workers: Wartime occupational trends for women workers were greatly affected by the influx of millions of women into the labor force from homes and from schools—many without any previous job training or experience. As a result, the number of women in civilian jobs showed a net increase of almost 7½ million between April 1940 and April 1945, and reached a total of over 19 million on the eve of VE-day.

Job transfers among women already employed prior to the war, however, were also a major factor. About 1½ million women, or 15 percent of those employed both at the time of Pearl Harbor and in March 1944, changed their occupational group. As shown in the following tabulation, a comparatively large amount of shifting occurred among women employed at the time of Pearl Harbor in farm, service, and sales occupations.

Occupation at time of Pearl Harbor	Women changing occupation group, Pearl Harbor to March 1944	
	Number (in thousands)	Percent of total employed women
Total, all occupations.....	1,450	14.7
Clerical workers.....	100	4.4
Proprietors, managers, officials..	30	6.2
Professional and semiprofessional workers.....	80	6.6
Craftsmen, foremen, operatives, and laborers (except farm)....	200	8.6
Farmers, farm managers, farm laborers.....	110	24.2
Other service workers.....	280	29.3
Domestic service workers.....	400	29.5
Sales workers.....	250	32.9

SOURCE: Based on unpublished data from the Monthly Report of the Labor Force, United States Bureau of the Census.

For women as for men, the greatest movement was in the direction of factory jobs. About a third of all the women who entered the ranks of the employed after the start of the war were classified in industrial occupations in March 1944. Among those previously employed, the movement was also toward the factories. For example, roughly a sixth of the women previously employed in service occupations, and a tenth of the saleswomen, had found industrial jobs by March 1944.

The entry of women workers into industries and occupations previously reserved almost exclusively for men was probably one of the most striking labor-market developments of the war period. In 1940, the Census had listed only a few thousand women in occupations such as welders or in semi-skilled jobs in the transportation-equipment industry. Five years later, the number of women employed in such occupations, particularly in aircraft and shipbuilding plants, had multiplied many times.

Less spectacular, but nevertheless important, was the role played by women workers in the more traditional female-employing occupations. Significant gains in employment of women as clerical workers (over 2 million between 1940 and 1945) were recorded, and women also replaced men, in large numbers, in such fields as sales, services (other than domestic), and farming.

Domestic service was the only field to show a large decline in employment of women between 1940 and 1945. During the war period, women left domestic service for better paying and more attractive jobs.

The number of women employed in professional and semiprofessional jobs also declined slightly over the 5-year period. Although professional workers ranked as one of the most stable occupational groups, a considerable number of women working as teachers and in other relatively low-paid professional fields, were attracted to better-paying jobs in the clerical and industrial occupations.

Postwar Changes

Postwar reconversion of the labor force brought occupational and industrial changes paralleling in magnitude those of the war years. Within 2 years after the end of the war in Europe, about 14 million service men and women had returned to civilian pursuits; other millions of civilian workers had transferred from munitions work or employment in Government war agencies to production of peacetime goods and services. At the same time, nearly 6½ million of the 8 million "extra" wartime workers had resumed prewar routines in the home or in school.³

The industrial distribution of the employed working force had, of course, undergone a marked transformation. Sharp gains were scored by those industries which had been pinched for manpower and materials during the war. The distributive, finance, and service fields added over 2 million workers over the 2-year period, and manufacturing industries, exclusive of the wartime munitions groups, showed a net gain of over 1 million. Construction employment increased by 600,000, or three-fifths, and smaller but significant gains were also reported by State and local governments and in public utilities and mining. These gains more than overbalanced net losses of about 2 million employees in the former munitions industries, and of 1 million in the Federal war agencies.

Extensive occupational shifting accompanied the postwar industrial redistribution. Information on the scope and direction of these job transfers is available from a special Census Bureau survey of persons employed in August 1946 who were also employed on VJ-day. These movements are here discussed for men and women workers, separately.

³ For discussion, see *The Labor Force in the First Year of Peace*, Monthly Labor Review, November 1946 (p. 609).

MEN WORKERS

The occupational regrouping of men workers in the 2 years after VE-day was the net result of two major movements: the large-scale inflow of ex-servicemen into the labor market and extensive occupational shifting among nonveterans, in accordance with the altered needs of the economy.

With the entry of some 11 million veterans into the civilian labor force by April 1947, employment of men in every occupational group rose above wartime levels. The largest relative increases were shown in clerical and sales jobs, in the professional group, and among nonfarm laborers—occupations which had lost large numbers of men during the war. With the sharp postwar expansion in the number of small businesses, the proprietor, manager, and official group also gained in importance.

Large numerical gains in the number of men operatives and of craftsmen and foremen were also reported. These groups declined in relative importance in the postwar period, but still accounted for a much greater proportion of employed men workers than in 1940.

Veterans: Discharge from the armed forces confronted most ex-servicemen with a major problem of occupational readjustment. A considerable proportion entered the postwar labor market to seek their first civilian jobs. Still others, whose prewar work experience had been limited to casual work or "blind-alley" jobs, were seeking more promising occupational outlets. Well under half of all ex-servicemen, it is estimated, actually availed themselves of reemployment rights under Federal law, and returned to work for their former employers.⁴

The reabsorption of veterans into civilian jobs was facilitated, however, by the strong demand for labor during the reconversion period, coupled with the withdrawal of many of the wartime "extra" workers from the labor market. Other factors which contributed to the rapid readjustment of many of the ex-servicemen included preferential hiring policies by employers, concerted placement efforts by the United States Employment Service and other public agencies, and widespread utilization of job training and educational benefits provided by Federal laws. By April 1947,

of a total of 13½ million male veterans of World War II back in civilian life, over 11 million were employed and an additional million were attending school full time.

With a few notable exceptions, employed veterans, 1 year after VJ-day, were distributed among the major occupations in about the same proportion as other men workers, after making allowance for the fact that veterans as a group are younger than other men workers (see tabulation below).

Major occupational group in August 1946	Percentage distribution of men in August 1946 in—	
	Civilian employment	Armed forces
Farm occupations.....	19.5	8.0
Nonfarm occupations.....	80.5	92.0
All groups.....	100.0	100.0
Nonfarm groups:		
Professional and semiprofessional workers.....	5.7	7.6
Proprietors, managers, and officials.....	15.9	8.4
Clerical workers.....	6.8	11.2
Sales workers.....	5.1	6.4
Craftsmen, foremen, and kindred workers.....	24.1	21.6
Operatives and kindred workers.....	23.5	29.8
Service workers.....	8.6	4.6
Laborers (except farm).....	10.2	10.3
Occupation not reported.....	.1	.1
Total.....	100.0	100.0

SOURCE: United States Bureau of the Census, Industrial and Occupational Shifts of Employed Workers: August 1945–August 1946, Series P-50, No. 1.

The most striking contrast was in the proportion of farm workers: 8 percent for recently discharged veterans, as against 20 percent for men who had been employed as civilians a year earlier. Although this is partly accounted for by age differences, it also reflects a continuation of the long-term movements of young people away from the farm. In addition, the smaller percentage of veterans on farms may be traced to the relatively low proportion of farm youth who had been recruited into the armed forces, as a result of wartime deferment policy for agricultural workers.

In the nonfarm segment alone, relatively fewer ex-servicemen were in the proprietor and managerial group, among craftsmen and foremen, and in the service group; considerably greater proportions were employed as operatives and as clerical workers. The smaller proportion of veterans

⁴ Readjustment of Veterans to Civilian Life, Monthly Labor Review, November 1946 (p. 712).

employed as managers or skilled craftsmen was to be expected, as these fields generally require many years of experience, and are composed of older men less likely to have been drawn into the armed forces. The postwar occupational distribution of veterans also reflected the fact that many had found their first civilian jobs during the early stages of the wartime employment expansion, when war manufacturing plants and Government war agencies were doing the bulk of the hiring. The greater proportion of veterans in the operative and clerical groups may therefore be traced, in part, to their pre-service work experience.

The occupational readjustment of ex-servicemen is, of course, still far from being completed. The mass entry of ex-servicemen into the schools and into job-training programs in fact poses a serious challenge to the economy in the years immediately ahead. In addition to the million veterans devoting full time to education, about 1½ million were attending trade schools and colleges on a part-time basis or were receiving on-the-job training under the veterans educational program in the spring of 1947. Naturally, the objective of most of these trainees is advancement into the higher-paid or more attractive occupational fields, such as professional and managerial jobs, or skilled crafts.

Men Nonveterans: Almost 4 million men, or 1 out of 8 employed in civilian jobs both in August 1945 and in August 1946, had changed their occupational groups in the course of the year (see table 2.)

Almost two-fifths of all transfers involved operatives and craftsmen, reflecting the impact of the post-VJ-day cut-backs in munitions employment. With the general unsettled condition of the labor market, and with job openings available in a wide range of peacetime industries during the first year after VJ-day, high rates of turn-over occurred in most of the other major occupational fields—notably among laborers, service workers, and the clerical and sales groups. As during the war period, professional and the managerial occupations continued to show the greatest stability.

The postwar occupational changes brought some reversal of the rapid wartime upgrading among civilian men workers. About a third of the workers employed as craftsmen and foremen

TABLE 2.—Occupational shifts during the first year of peace

Major occupation group in August 1945	Employed persons whose occupation group changed between August 1945 and August 1946					
	Number (in thousands) ¹			As a percent of total in 1945 occu- pation group em- ployed at both dates		
	Total	Male	Fe- male	Total	Male	Fe- male
All groups.....	15,020	3,830	1,190	11.3	12.4	8.8
Professional, semiprofessional workers.....	120	70	50	5.0	5.1	4.9
Proprietors, managers, officials (except farm).....	200	160	40	4.6	4.4	6.4
Farmers and farm managers.....	380	360	20	8.2	8.5	4.7
Clerical and kindred workers.....	380	220	160	6.9	12.7	4.2
Sales and kindred workers.....	270	140	130	12.9	11.9	14.1
Craftsmen, foremen, and kindred workers.....	790	740	50	12.5	12.2	25.0
Operatives and kindred workers.....	1,260	920	340	14.2	15.4	11.6
Domestic service workers.....	110	10	100	9.4	16.7	9.0
Service workers except domestic.....	430	240	190	12.7	12.1	13.5
Farm laborers and foremen.....	430	360	70	13.9	18.7	6.1
Laborers (except farm).....	510	490	20	20.5	20.1	30.9

¹ Data are based on a sample survey, and small figures are therefore subject to large sampling variation, and must be used with caution.

² Includes 140,000 persons whose occupation was not reported.

SOURCE: Bureau of the Census, Industrial and Occupational Shifts of Employed Workers: August 1945-August 1946; Series P-50, Number 1.

on VJ-day who shifted occupations were working as operatives a year later. Similarly, large numbers of wartime operatives moved to unskilled jobs. There were, however, largely compensating movements up the occupational ladder, particularly in the rapidly expanding sectors of industry. Thus, many men who had been employed as operatives in war plants had found jobs as craftsmen in the building trades or in other manufacturing industries a year later.

WOMEN WORKERS

The cut-backs in war production and the progress of large-scale demobilization shortly after VJ-day were accompanied by the withdrawal of several million women workers from the civilian labor force. Two years after VE-day, employment of women had dropped by 3½ million to 15.8 million, but the number of unemployed women was only slightly above the wartime level.

Because many women workers in war jobs withdrew from the labor market instead of seeking other employment, the volume of occupational shifting among those women who remained in the labor force was much smaller than might otherwise have been the case. Of women employed both on VJ-day and a year later, about 9

percent had changed to a different occupational group. The greatest shifts, numerically, were by women who had been employed as production workers in August 1945. Relatively large occupational turn-over was also indicated, however, among women in sales and service occupations, and in the unskilled labor categories. The professional, managerial, and clerical groups showed the smallest proportion of postwar shifts.

As a net effect of these shifts, the number of women employed as operatives and craftsmen dropped by over a million in the 2 years following VE-day, to about 3.6 million. Much of the decline was concentrated in the heavy munitions manufacturing industries, in which women had filled in on "men's jobs" during the war. Women, however, retained a somewhat greater proportion of industrial jobs than in prewar years. Thus, in the durable-goods manufacturing industries, the proportion of women production workers had fallen from a wartime peak of 25 percent, to only 13 percent in April 1947, but this was still considerably above the prewar ratio of 8 percent in October 1940.

Other important postwar occupational shifts also brought the distribution closer to prewar patterns. The proportion of women in farming fell off sharply, as ex-servicemen returned; the professional and the service occupations regained some of their wartime losses in relative position.

In contrast, the proportion of women employed in sales work, which had risen during the war, continued to gain in the postwar period. As a result, the ratio of women to men in sales jobs underwent a marked increase after 1940: 2 out of every 5 sales jobs in April 1947 were held by women, as compared to slightly over 1 in 4 in 1940.

Trends Among Major Occupational Groups

Occupational movements in 1940-47 were determined by the needs of a wartime economy and by the process of reconversion to peacetime production. Long-term trends, which had persisted over a period of decades, were accelerated for some occupations, and temporarily reversed for others. With the perspective provided by almost 2 years of peace in an economy operating at high levels of employment and income, it is possible to appraise more accurately the long-range significance of the recent shifts.

Professional and Semiprofessional: The professional and semiprofessional group declined slightly in relative importance as compared with 1940, in contrast with the long-term uptrend prior to the war. The war interrupted training of many students in a wide range of nontechnical professions, and these losses had not yet been made good. Also, many experienced professional workers, particularly school teachers, were attracted to better-paying jobs in other occupations.

In the postwar economy, increased demands developed for many types of professional services, particularly in such fields as teaching and civil engineering. Attendance at colleges and professional schools at capacity levels in 1947, created a strong likelihood of steady gains in the proportion of professional workers in the next few years.

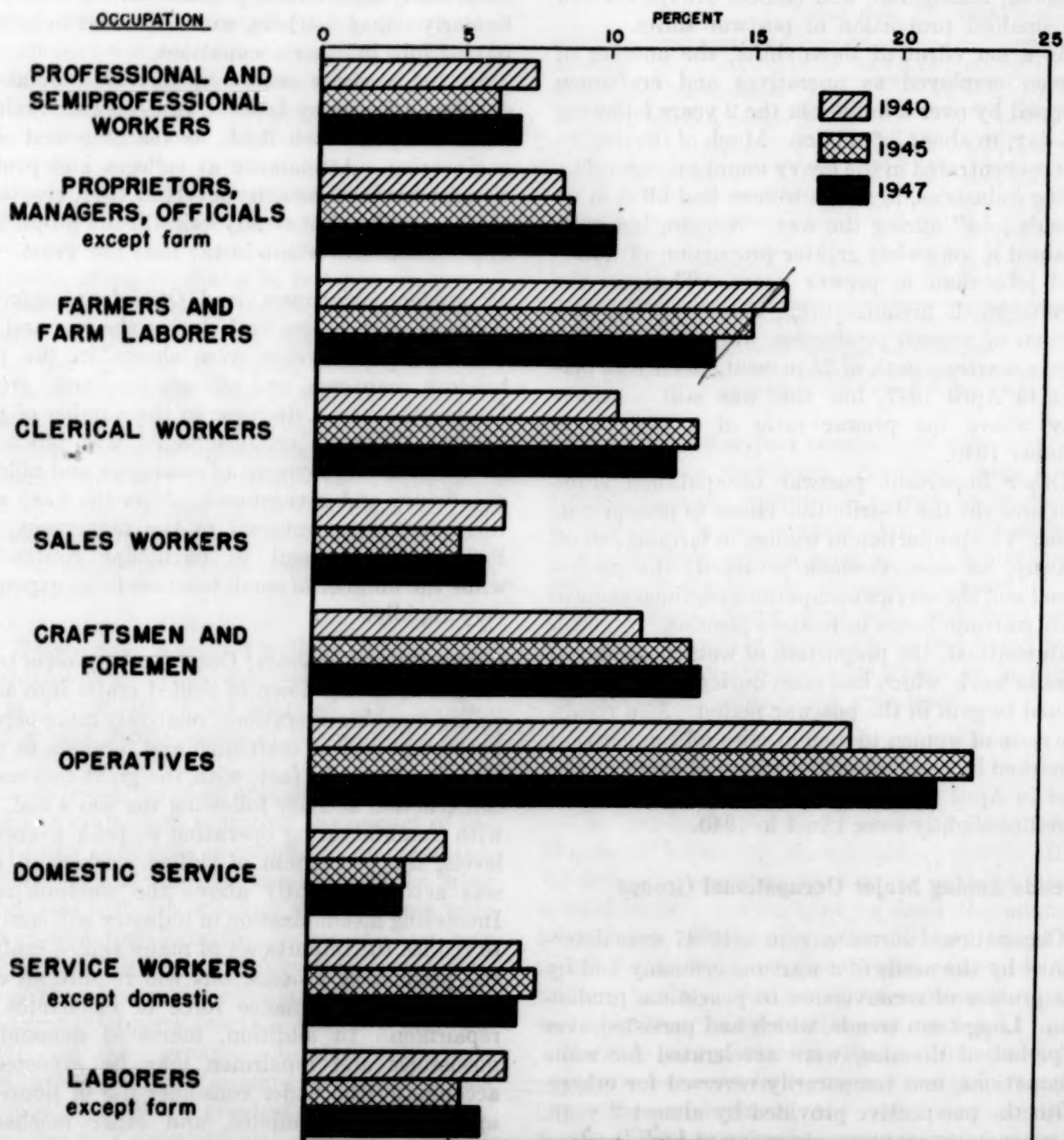
Proprietors, Managers, and Officials (Nonfarm): Gains in relative size both during the war and the first 2 postwar years were shown in the proprietors, managers, and officials (nonfarm) group. During the war, a decrease in the number of proprietors of small establishments was offset by increases in employment of managers and officials in industry and government. After the war's end, there was some reversal in the movement; the Federal Government in particular contracted, while the number of small business firms expanded very rapidly.

Craftsmen and Foremen: Despite a long-term trend toward breaking down of skilled crafts into semi-skilled machine operations, relatively more persons were employed as craftsmen and foremen in 1947 than in 1940. In fact, with the great increase in construction activity following the war's end, and with manufacturing operating at peak peacetime levels, the proportion of skilled workers in 1947 was actually slightly above the wartime ratio. Increasing mechanization of industry will continue to reduce the importance of many skilled crafts in the productive process, but will require an ever-expanding maintenance force of mechanics and repairmen. In addition, increased demand for mechanics and repairmen may be expected to accompany the wider consumer use of household appliances, automobiles, and other mechanical equipment.

Operatives: The increase in relative importance of operatives since 1940 reflects the much greater

OCCUPATIONAL DISTRIBUTION OF EMPLOYED WORKERS

AS OF APRIL 1940, 1945 AND 1947



role of manufacturing in the postwar economy. It is also in line with the long-term trend toward increasing mechanization, which results in the upgrading of laborers and the downgrading of skilled workers to semiskilled operations. This movement received great impetus during the war in industries such as aircraft and shipbuilding, and made it possible for many women workers to enter these industries. Owing to the large-scale introduction of new machinery and equipment in peacetime industries, operatives may be expected to become an increasingly important part of the industrial work force.

Laborers (Nonfarm): The war speeded up the diminishing importance of the laborer group and, despite the sharp postwar expansion in employment of building laborers, the group continued well below its relative level in 1940. Technological advances are expected to continue to replace unskilled manual labor by machines.

Clerical and Sales: The "white-collar" group has, in past decades, consistently been one of the fastest growing in the Nation. The development of the country's complex industrial economy expanded the needs for record-keeping and correspondence work and has multiplied the number and variety of distributive outlets. In addition, the greater role of government in the economy contributed to the increased demand for clerical workers.

During the war, the clerical group increased rapidly and, in 1947, still retained a considerably greater proportion of the total work force than in 1940. On the other hand, sales occupations, which lost ground during the war, expanded rapidly after the war's end. The long-range trend and recent developments suggest that the white-collar group will continue to gain in importance.

Domestics: The domestic group is one of the few occupational categories that declined in absolute numbers as well as in relative size after 1940. Essentially this is a byproduct of the fact that domestic workers in good times take jobs in higher-paying occupations. The level of economic activity, therefore, will be a major determinant of the size of the domestic group.

Other Service Workers: Service workers in hotels, restaurants, amusement places, and the like, increased in importance during the war when many consumer goods were not available. In the early postwar years, this group fell back in relative position, as the emphasis in spending shifted to purchases of all types of hitherto scarce commodities. Service occupations still retained, however, about the same proportion of all employed workers in 1947 as in 1940.

As consumers replenish their stocks of goods, they are likely to again increase the proportion of their expenditures for services. The outlook, for employment of these service workers, therefore, is one of moderate expansion.

Farmers and Farm Labor: There has been a consistent long-term downtrend in the importance of agriculture as a source of employment. Improved farming methods and advances in transportation, refrigeration, storage, and food processing have made it possible for one farmer to feed more and more people. Despite the great expansion in agricultural output over the past decades, migration in the United States has characteristically been away from farms to expanding urban centers.

In addition, the size of the farm labor force from year to year has been strongly influenced by the availability of alternative opportunities in non-agricultural activities. In good times, the movement away from the farm has been stepped up. During the war and postwar years, for example, the high level of job opportunities in nonagricultural industries greatly accelerated the flow of workers out of agriculture. In bad times, many farm workers have preferred the relative security of farms to the insecurity of job hunting in the city. Moreover, during depression periods, there have been considerable movements "back to the farm," counter to the general direction of migration.

A continuation of the long-term decline in the relative size of the farm labor group may be expected to accompany further advances in the mechanization of farm processes. The rate of movement away from farms, however, will fluctuate with the ability of industrial communities to absorb in-migrants from rural areas.

France: Wage Trends and Wage Policies, 1938-47

HELEN I. COWAN¹

THE LEVEL AND STRUCTURE of wages in postwar France differ in certain notable respects from those of the prewar period. Hourly money wage rates at the beginning of 1947 were approximately 4 to 5 times, and total earnings, including family allowances, about 5 to 8 times the 1938 levels; but, owing to depreciation in the purchasing power of the French franc, real wages were below prewar norms. Differentials between the wages of skilled and unskilled, men and women workers, high-paid and low-paid occupations, and between Paris and the Provinces have altered materially, depending upon the wage legislation adopted from time to time. On the whole, in each of these cases, differentials have narrowed since 1938. In this article, the 1947 wage structure is compared to that of 1938, and its development is traced during the period 1938 to 1947.²

¹ Of the Bureau's Foreign Labor Conditions Staff.

² Based mainly on information from the Bulletin de la Statistique Générale de la France, and Etudes et Conjoncture, Union Française (Ministry of National Economy, Paris), 1942, 1945, 1946, and 1947; the Revue Française du Travail (Ministry of Labor and Social Security, Paris), 1946 and 1947; the Journal Officiel de la République Française (Paris), 1939, 1945, 1946, and 1947; Le régime des salaires ouvriers en France, in Droit Social (Librairie Sociale et Economique, Paris), December 1945; current periodicals; and two official French wage series. The older of these series (published in the Bulletin de la Statistique Générale de la France) is prepared from questionnaires answered by the industrial courts (Conseils de Prud'hommes) or the mayors of the capital cities of the Departments (Provinces) and by certain employers' associations in Paris. This series provides wage data for some 40 male occupations and 7 women's occupations in industry in the Provinces and for a narrower coverage in Paris. For these occupations, the selection of which has not changed greatly since 1925, it offers material for comparing present with prewar trends. The newer series (published by the Revue Française du Travail since May 1946) is prepared from the results of some 50,000 questionnaires which are sent quarterly to industrial, commercial, and other establishments subject to official labor inspection. Branches surveyed in this series are shown in table 2. Since July 1946, the inquiries have been

Wage Trends, 1938-47

Money Wages: According to the French Ministry of National Economy, the average hourly wage rates of male workers in Paris industry rose from 10.67 francs³ in October 1938 to 47.46 francs in October 1946, an increase of 345 percent. The corresponding figures for workers in the Provinces are 6.20 and 37.19 francs, an increase of 499 percent. On the basis of a different series (issued by the Ministry of Labor and Social Security) it is estimated that between October 1946 and January 1947, hourly wage rates increased by approximately 3 to 4 percent. Table 1 shows the increases for different groups of workers from 1938 to 1947, and table 2 presents January 1947 hourly wage rates in France, by industry, class of worker, and sex.

The available statistics indicate that average hourly rates in January 1947 were approximately 4 to 5 times higher than in 1938.⁴ Total earnings, however, were augmented by piece rates, bonuses, overtime pay, and other additions, some of which are difficult to measure. Statistics show that earnings for piece work rose faster than for time work in 1946, but data for a definite comparison of 1946 piece rates with those of 1938 are lacking. In October 1946 piece workers' earnings exceeded the legal maximum by 10.8 percent (for maximum wage, see p. 156). Earnings of workers with families were supplemented to an even greater extent by large postwar increases in family allowances.

Family allowances, which were greatly increased in scope and coverage during and after World War II, have become an essential part of the French wage system. Family allowances provide stipulated percentages of the basic monthly wage, which vary according to the number of children,

broadened to include a limited number of establishments employing fewer than 10. About 70 percent of the questionnaires are usually returned, giving a sample of some 2,000,000 out of a working population of about 11,000,000 (not including agriculture, mines and quarries, personal, domestic, and public service).

³ Average exchange rate of the French franc, 1938=2.88 cents (United States currency), 1939=2.51 cents, 1940=2.08 cents, 1945=1.97 cents. On December 26, 1945, the official rate of exchange was established at 119 francs to the United States dollar, giving an average franc rate of 0.84 cents.

However, great caution should be used in comparing French wage data in this article with United States wages. Comparisons of wages between countries are difficult to interpret because of the fact that foreign exchange rates do not truly reflect international differences in living costs and because of the lack of information on relative productivity by industry in different countries. Wherever productivity studies have been made, the differences favor the United States.

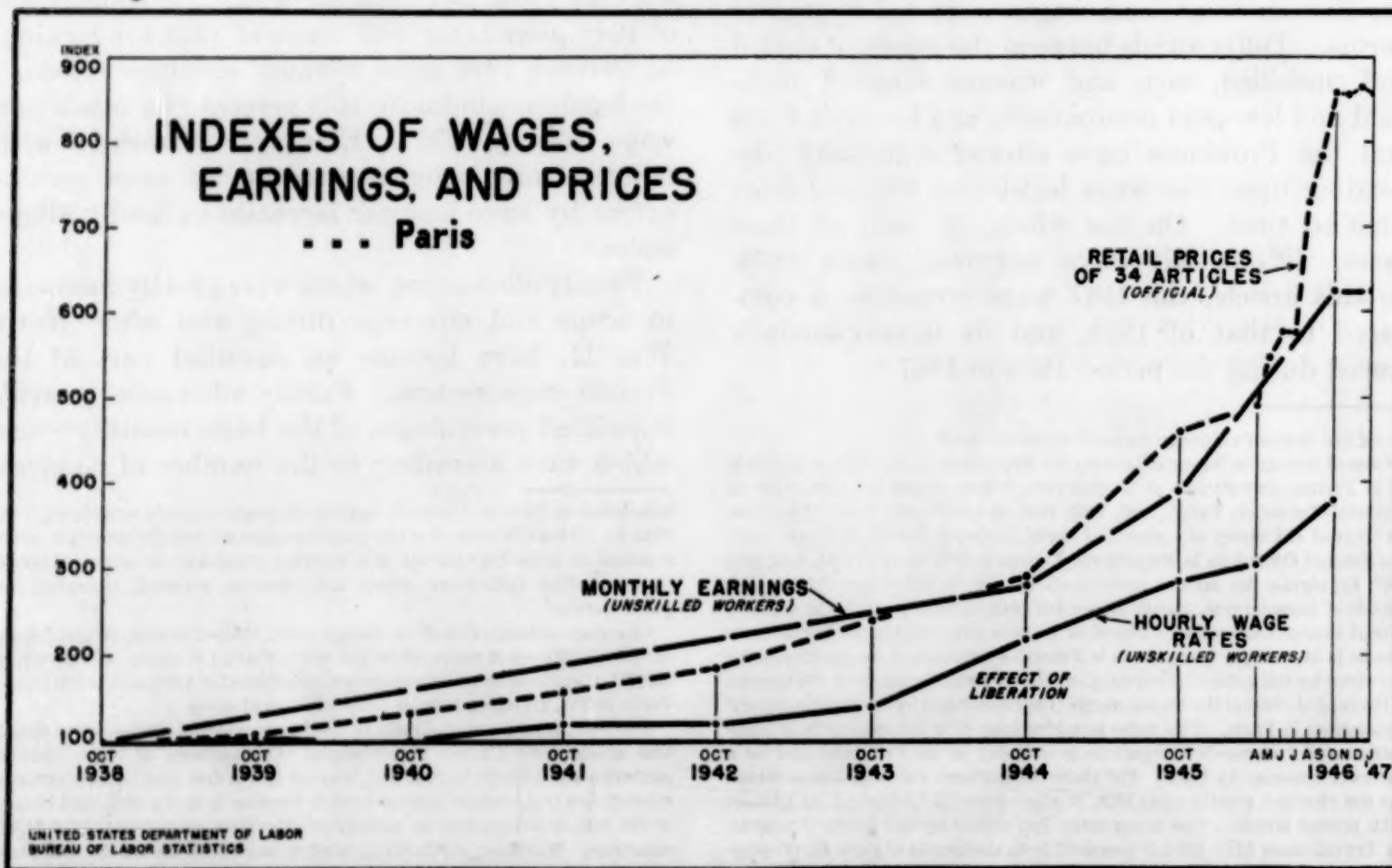
⁴ For French wages in the prewar period, see Monthly Labor Review, September 1938 (p. 624) and October 1944 (p. 705).

TABLE 1.—Wage rates for male workers and indexes of wage rates and prices in France, 1938-47

Period	Average wage rates (in francs)				Indexes (October 1938=100) of —								Index (1938=100)	
	Hourly rates in industry		Daily rates in—		Hourly wages in industry				Average monthly earnings of male laborers (family of 2 children)		Retail prices (34 articles)			
			Agricul- ture ¹	Coal mines ²	Skilled males		Unskilled males							
					Paris	Provinces	Paris	Provinces					Paris	Provinces
1938: Year			26.95										100	100
1938: October	10.67	6.20		57.97	100	100	100	100	100	100			106	³ 111
1939: October	10.90	6.30		60.60	105	102	103	103					132	³ 143
1940: October	10.90	6.34		60.61	103	105	100	104					155	³ 170
1941: October	12.11	7.17		80.09	113	117	117	122					185	³ 206
1942: October	12.27	8.22		87.10	115	135	118	139					241	³ 257
1943: October	12.73	9.11		90.40	124	148	138	152						
1944: Year			72.00										285	297
April					156	165	143	168					274	³ 290
October	22.68	15.82		⁴ 151.76	205	239	217	256	280	318			291	³ 316
1945: Year													393	403
April					277	327	264	315					325	³ 374
October	34.78	27.46		304.31	304	404	286	393	391	505			460	³ 515
1946: Year			129.30										645	724
April	36.24	28.54			321	418	303	401					491	³ 587
October	47.46	37.19		476.00	431	556	401	528	624	762			858	³ 971
1947: January									624	789			856	
April													837	

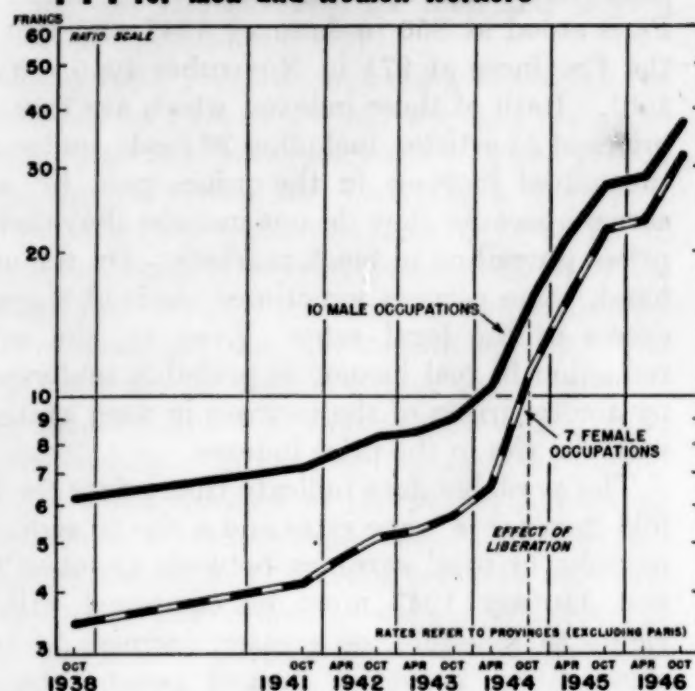
¹ Including payment in kind.² Including family allowances.³ September.⁴ Including family allowances and overtime.⁵ November.⁶ May.

SOURCE: Bulletin de la Statistique Générale de la France (Ministry of National Economy, Paris), 1946 and 1947; Etudes et Conjoncture, Union Française (Ministry of National Economy, Paris), December 1946-January 1947.

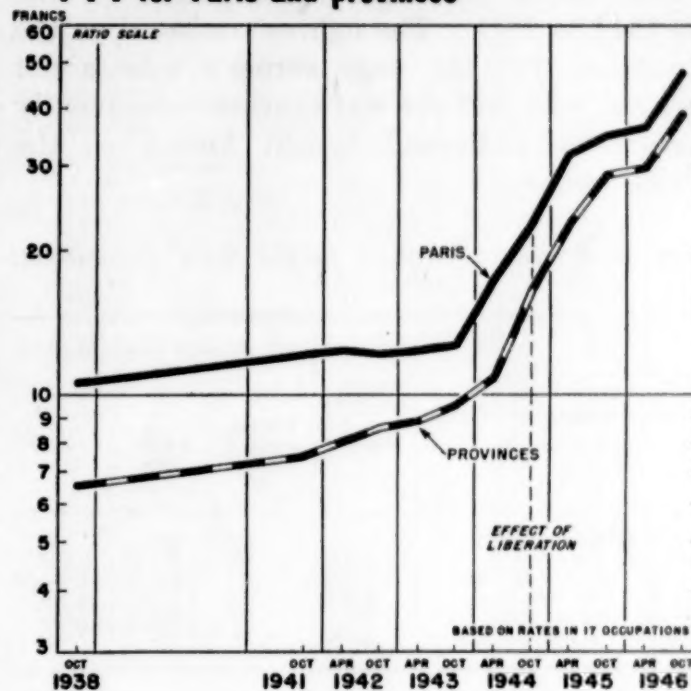


HOURLY WAGE RATES DRAW TOGETHER. . . .

. . . for men and women workers



. . . for Paris and provinces



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TABLE 2.—Average hourly wage rates in France, January 1, 1947, by industry, sex, and class of worker, and wage-rate indexes

Industry	Average hourly wage rates ¹ (in francs)								Index of average hourly wage rates (January 1, 1946 = 100)	
	Unskilled laborers		Heavy laborers		Specialized workers		Skilled workers			
	Male	Female	Male	Female	Male	Female	Male	Female	Jan. 1, 1947	Oct. 1, 1946
All industries	34.1	31.2	37.5	33.8	42.3	38.0	49.4	44.8	143	138
Food.....	32.5	30.2	34.9	32.8	39.5	36.1	44.8	40.2	143	141
Chemical.....	32.3	30.5	35.3	32.8	38.4	35.1	42.7	39.1	140	138
Rubber.....	33.5	30.3	35.3	34.1	39.0	36.1	46.1	40.4	143	137
Paper, cardboard.....	34.7	30.9	37.3	32.8	42.7	37.5	49.7	45.6	141	136
Books, printing.....	39.6	32.9	43.8	36.3	52.1	43.2	60.7	49.0	149	142
Textiles.....	33.9	31.8	37.5	34.5	43.4	38.0	49.1	42.8	151	140
Clothing.....	34.7	31.2	38.4	34.3	44.4	38.9	50.8	45.4	148	144
Leather and hides.....	31.9	30.8	36.2	33.6	42.2	34.4	50.6	47.8	141	139
Wood.....	33.9	31.2	38.7	34.8	44.2	39.1	51.9	47.4	140	138
Metallurgy.....	32.1	30.3	38.5	37.6	42.0	39.9	50.2	42.6	141	134
Metal work.....	33.9	32.0	37.6	34.7	42.0	37.7	50.5	44.7	142	136
Fine metals, precious stones.....	33.9	32.3	37.4	35.1	47.6	44.6	59.3	53.8	143	146
Stonecutting.....	36.7	40.4	46.0	46.0	51.3	51.3	51.3	51.3	140	142
Construction, earthwork.....	34.1	28.1	38.1	32.9	42.8	38.5	48.0	43.2	136	135
Bricks, pottery, etc.....	32.3	30.3	36.1	33.5	40.4	36.8	48.4	44.0	141	137
Transportation (except National Railway System).....	35.9	29.9	39.5	32.0	42.6	36.1	47.7	40.8	141	139
Commerce.....	34.1	31.9	37.3	33.1	40.7	37.0	46.1	41.7	141	137

¹ In highest wage zone; in other zones the legal minima are 5, 10, 15, 20, and 25 percent lower.

SOURCE: Revue Française du Travail (Ministry of Labor and Social Security, Paris), January and April, 1947.

the region of France, and the number of wage earners in the family. Table 3 shows allowances for Paris for August 1939 to December 1941 and for the Seine Department, which includes Paris, from 1944 to 1947. The figures are based on the assumption that the wage earner's wife is not employed, and that the wage earner consequently receives the additional benefit known as the "salaire unique."

TABLE 3.—Family allowances in the Seine Department, 1939-47¹

Period	Basic monthly wage (in francs) ²	Allowance (in francs) for father of—		
		1 child under 5 years of age	2 children	4 children
August 1939-December 1941.....		150	300	900
January 1944-August 1944.....	2,250	450	787.50	2,025
September 1944-July 31, 1945.....	2,250	675	1,248.75	3,037.50
August 1945-June 1946.....	4,500	900	1,665	4,320
July 1946-December 1946.....	5,650	1,130	3,390	7,910
After January 1, 1947.....	5,650	1,130	3,390	7,910

¹ The family allowance law of Aug. 22, 1946 fixed the average monthly wage upon which family allowances are calculated at 225 times the minimum hourly wage of an unskilled worker in the metal industry in the Department of the Seine. Allowances in other Departments are subject to the graduated reductions customary in the wage zones. (See Journal officiel de la République Française, Aug. 23, 1946.)

² SOURCE: Bulletin de la Statistique Générale de la France, April 1942 and April 1947.

The increase in earnings caused by the longer hours worked since liberation cannot be measured exactly. Average weekly hours rose from 39.9 in December 1944 to 43.8 in October 1946. On October 1, 1946, about 40 percent of the workers (reported in the quarterly survey of the Ministry of Labor and Social Security) averaged 40 hours weekly, 29 percent 40 to 48 hours, and 29 percent 48 hours or more. Under terms of a law of February 25, 1946, a minimum rate of time and a quarter was authorized for the first 8 hours of overtime above 40, and time and a half thereafter, with a limit of 20 hours overtime per week. According to an official French estimate of early 1947, the wage increase resulting from the overtime law might reach 24 percent in the building trades and average 18 percent for the manufacturing industries.

As a result of the increase in average hourly wage rates, in family allowances, and in overtime, the monthly earnings in January 1947 of a Paris worker with 2 children were more than 6 times the October 1938 level; those of a Provincial worker with 2 children, about 8 times.

Real Wages: The increase in money wage rates between 1938 and 1947 was more than offset by price increases and real income declined accordingly (see table 1). The retail price index for Paris stood at 856 in January 1947 and that for the Provinces at 971 in November 1946 (1938=100). Both of these indexes, which are based on prices of 34 articles, including 29 foods, understate the actual increase in the prices paid by wage earners because they do not include above-ceiling prices prevailing in black markets. On the other hand, wage earners sometimes received wages in excess of the legal rates. Even so, the actual reduction in real income is probably understated by a comparison of the increase in wage statistics with the rise in the price indexes.

The available data indicate that a four- or five-fold increase in wage rates and a six- to eight-fold increase in total earnings between October 1938 and January 1947 must be compared with an eight- to nine-fold, or greater, increase in retail prices. The reduction in real income was the inevitable outcome of the low, though rising, rate of production of the French economy in the postwar period. The index of industrial production (1938=100) averaged less than 60 in the last 5 months of 1945 and 81 in 1946; it stood at 89 in January 1947.

Wage Structure: The most significant changes in the French wage structure, between 1938 and 1947, resulted from the wartime tendency toward the leveling of wages for men and women workers and for wage earners of different categories and places. Even though the postwar period brought some reversals in this trend, especially following the reestablishment of the occupational categories in 1945 (see p. 155), the effects of the trend are easily seen when the wage structure of 1947 is compared with that of 1938.

A marked change is the reduction in the spread between average hourly rates of men and women workers, as illustrated below.

	Average hourly rates (in francs) in cities other than Paris	
	October 1938	October 1946
Males in 10 occupations.....	6.19	37.14
Females in 7 occupations.....	3.42	31.74

In October 1938, hourly wage rates in the 10 predominantly male occupations were nearly twice those of females in the 7 predominantly female

occupations; 8 years later they were only 17 percent higher. However, the actual spread between male and female hourly rates was much less, both in 1938 and in 1946, for men and women working in the same industry.

In July 1946, a decree undertook to abolish the differential between men's and women's rates and require equal pay for equal work. In the prewar period the differential had been about 20 percent and intermediate legislation had fixed it at 10 percent. Quarterly returns from employers indicate that between July and October 1946 the differential diminished but did not disappear. The general average for women's rates was 11 percent lower than for men's in October, compared to 14 percent in July. In October the rates for highly skilled women workers in the fourth wage zone ranged from 4 percent below men's rates in the clothing industry to 21 percent below in book and job printing; for ordinary women laborers the range was from 5 percent below in metallurgy to 12 percent below in the book and printing industry. Women's wages in October 1946 approximated the legal minimum-wage rates.

Differentials between workers of varying degrees of skill were somewhat smaller, on the whole, in late 1946 and early 1947 than at the end of 1938. In table 4 the list of 10 highest paid occupations generally represents more highly skilled workers, while the 10 lowest paid represent semiskilled and include unskilled laborers. Average hourly earnings for all 41 occupations rose to 6 times the October 1938 level by October 1946. The average increase in the 10 highest paid occupations was only 5.7 times compared with an increase of 6.3 times for the 10 lowest paid occupations.

Miners' wages were an exception to the leveling tendency in the skilled occupations; by October 1946, miners' hourly rates were 8.2 times the October 1938 level. Figures for the metal industries of the Paris region, including both piece and time workers, show that recently the highly skilled workers fared better than semiskilled and unskilled groups. A third exception to the tendency toward narrowing differentials was the ordinary laborers' group; table 4 indicates that most other occupations enjoyed higher rates of wage increases than did laborers.

Another change in the wage structure is the reduction in the spread between wage rates in Paris and the Provinces. Before the war, hourly

TABLE 4.—Average hourly wage rates (in francs ²) for males in French cities, other than Paris, in October of 1938 and 1946 ¹

Occupation	October 1938	October 1946	Ratio: October 1946 to October 1938
41 occupations.....	6.20	37.19	6.0
10 lowest-paid occupations: ³			
Brewers.....	5.54	33.67	6.1
Saddlers, harnessmakers.....	5.48	35.76	6.5
Shoemakers.....	5.45	36.17	6.6
Dyers, cleaners.....	5.56	35.28	6.3
Weavers.....	5.13	33.01	6.4
Ropemakers.....	5.31	33.68	6.3
Coopers.....	5.90	36.66	6.2
Navvies (terrassiers).....	5.67	34.78	6.1
Brickmakers.....	5.72	36.00	6.3
Laborers.....	4.92	27.16	5.5
Unweighted average.....	5.47	34.22	6.3
Highest-paid occupations: ⁴			
Printers, compositors.....	6.87	40.69	5.9
Bookbinders.....	6.84	40.20	5.9
Coppersmiths.....	6.90	38.41	5.6
Blacksmiths.....	6.59	37.47	5.7
Fitters.....	6.88	37.94	5.5
Metal turners.....	6.92	38.20	5.5
Electrical fitters.....	6.56	38.99	5.9
Watchmakers.....	6.56	39.58	6.0
Stone cutters.....	6.72	39.45	6.0
Ornamental carvers.....	7.78	42.79	5.5
Unweighted average.....	6.86	39.38	5.7

¹ Hourly wages, which do not include family allowances, are from Bulletin de la Statistique Générale, April 1947.

² Average exchange rates for franc were 2.67 cents in October 1938 and 0.84 cent in October 1946.

³ Lowest paid in October 1938.

⁴ Highest paid in October 1938.

rates in Paris, which were the highest in France, were at least 50 percent above those of the lowest wage area. In the latter part of 1946, the difference was only 25 percent (for postwar wage zones, see p. 155). Table 5 presents wage rates in Paris and

TABLE 5.—Average hourly wage rates (in francs ¹) in Paris and in other French cities, October 1938 and 1946 ²

Occupation	October 1938			October 1946		
	Paris and its environs	Cities other than Paris	Ratio: Paris to other cities	Paris and its environs	Cities other than Paris	Ratio: Paris to other cities
Average, 17 occupations.....	10.67	6.53	1.63	47.46	38.73	1.22
Printers, compositors.....	11.90	6.87	1.73	50.98	40.69	1.25
Bookbinders.....	11.90	6.84	1.74	55.00	40.20	1.37
Tailors.....	8.49	5.87	1.45	57.50	38.45	1.50
Carpenters.....	9.85	6.44	1.53	45.50	38.49	1.18
Joiners.....	9.85	6.35	1.55	43.60	37.88	1.15
Plumbers.....	10.45	6.47	1.62	47.30	38.36	1.23
Blacksmiths.....	11.70	6.59	1.78	49.75	37.47	1.33
Locksmiths.....	9.85	6.35	1.55	43.60	37.76	1.15
Metal turners.....	11.90	6.92	1.72	48.25	38.20	1.26
Electrical fitters.....	9.91	6.56	1.51	45.05	38.99	1.16
Stonecutters.....	12.85	6.72	1.91	48.05	39.45	1.22
Masons.....	10.15	6.43	1.58	46.50	39.26	1.18
Navvies.....	9.55	5.67	1.68	39.35	34.78	1.13
Roofers.....	10.45	6.50	1.61	47.30	38.89	1.22
House painters.....	9.85	6.33	1.56	43.60	38.92	1.12
Ornamental carvers.....	11.35	7.78	1.46	51.05	42.79	1.19
Glaziers.....	11.45	6.34	1.81	44.45	37.91	1.17

¹ Average exchange rates for franc were 2.67 cents in October 1938 and 0.84 cent in October 1946.

² Hourly wage rates, which do not include family allowances, are from Bulletin de la Statistique Générale.

in other cities for 17 occupations in October of 1938 and 1946. In 1938 Paris wages for males were 1½ times those of other cities (using an unweighted average of the 17 occupations); in 1946 the ratio was about 1½. However, the spread in real wages had not been reduced nearly as much because retail prices rose more sharply in the Provinces than in Paris.

Wage-Price Policies, 1939-47

Wartime Controls, 1939-44: When World War II began, wages in France were being fixed by collective agreement under terms of the legislation of March 25, 1919, and June 24, 1936. The legislation of 1936 made compulsory the inclusion in collective agreements of minimum rates by category and area.

The outbreak of war put an immediate end to free collective bargaining and an almost immediate end to the free play of prices in the economy. The first step toward freezing prices of goods and services at their prewar levels was taken in a decree of September 9, 1939. Wages were blocked at levels prevailing September 1, 1939, by a decree of November 10, 1939, and another of June 1, 1940. This wage legislation provided that rates could be changed only by the Minister of Labor on advice of a technical commission consisting of Government officers and two representatives of employers and labor. The Vichy Government continued the power of the Minister by law of July 12, 1940, but eliminated the technical commission. The Minister's wage-fixing power was also extended beyond rates in commerce and industry to include the liberal professions, Government offices, etc., and other occupations, except agriculture.

The obvious purpose of the occupying authorities was to keep wage rates low in order to force French workers into war production industries in France or Germany. The wage freeze was more effective than the price freeze and real wages fell during this period, although the Government authorized three main wage revisions which involved increases. In the third of these, in June 1943, the Government ordered a general readjustment of wages and undertook to fix wage rates by decree for the different classes of skill in each industry. Many employers exceeded the fixed legal rates by paying bonuses and furnishing

meals and other services. By April 1944, wage rates as indicated by the indexes (1938=100) for unskilled laborers in Paris and the Provinces, respectively, were 143 and 168 (see table 1).

Meanwhile, German purchases and requisitions, an enormous increase in currency (resulting mainly from the daily indemnity which the French were required to pay the Germans), and growing scarcities of goods had driven official retail prices upward, so that in the spring of 1944 the indexes in both Paris and the Provinces were nearly 200 percent above the 1938 levels. It should be stressed again that retail-price index numbers are based on official prices, that black-market prices were much higher, and that the supply of goods at official prices was far from meeting minimum demands. At liberation, the returning French Government found money wage rates for various occupations and regions in extreme disorder and real wages at least 50 percent below their 1938-39 level.

Wage Policy of Provisional Government: In accord with the demands of the French National Council of Resistance and the underground trade-union movement for adequate wages and living standards, the French Provisional Government in Algiers adopted in March 1944 a resolution requiring the immediate raising of wages and their subsequent adjustment to the rise in prices and the volume of goods available. General principles for the policy were outlined by an order in Algiers on August 24 and another in Paris on September 14, 1944. The validity of the acts of the Vichy Government was recognized, for the increases were to be based upon the rates already in force. Officially these first increases granted were to range from 50 percent for laborers to 30 percent for more skilled workers. Rates for miners and civil servants were also raised. Pensions and old-age allowances were increased, and the maximum wage for eligibility for social-insurance coverage was moved up from 48,000 to 60,000 francs.

The increases in wage rates were supplemented by increases in family allowances. These allowances are intended to adjust the worker's wage to his family position and social obligations. They were initiated by employers as early as World War I, were made obligatory in 1932, and were broad-

ened and advocated for encouraging family growth after World War II.⁵

Unfortunately—perhaps inevitably—in the confusion of establishing the Provisional Government's control, the wage increases were not uniform in regions or industries and frequently they exceeded the plan. Moreover, the financial and economic controls originally designed to accompany the wage increases did not materialize. At the moment of greatest difficulty in the industrial revival, wage demands had to be met. With continuing scarcities and a thriving black market, the rise in nominal wages brought little or no increase in real wages. In addition, the wage increases tended to reduce differentials and caused discontent among the higher paid workers.

The Government consequently acceded to the requests for a complete overhauling of the wage system, and in November 1944 called for detailed data on minimum wages of all classes of workers in effect September 1939 and 1944. The French did not, at this time, return to the prewar system of fixing wages by collective bargaining, but rather made use of the system instituted by law of November 10, 1939 (see p. 154). In January 1945, the Government appointed a committee of representatives of employers and labor organizations and of technicians from the interested Ministries to recommend necessary wage reforms.

Theoretically, under the new system, the Minister acted (for example, in appointing a subcommittee to work out wage systems for specific industries) on the recommendations of representatives of management and labor in the central committee. Actually, in view of the disorganization of employers' associations, the most powerful labor organizations presented their demands to the Minister, and on these demands the Minister took action, announcing the resultant decision by decree. During this period, the head of the Government maintained contact with employers through an unofficial council.

*Reform of Wage Structure, 1945:*⁶ The wage structure established by the central committee and its industry subcommittees in 1945 has four distinct-

⁵ For detail, see *Revue Française du Travail* (Ministry of Labor and Social Security, Paris), October 1946, pp. 533-39, May 1947, pp. 482-91; *Population* (National Institute of Demographic Studies, Paris), January-March 1946, pp. 155-58, October-December 1946, pp. 681-98; *International Labor Review*, December 1945, p. 708; and *Family Allowances in Various Countries*, Bulletin No. 853, Bureau of Labor Statistics, U. S. Department of Labor.

⁶ Summarized from *Droit Social* (Librairie Sociale et Economique, Paris) December 1945, pp. 391-400.

tive characteristics: A minimum base wage rate; the adjustment of minimum base rates to geographic and cost-of-living zones throughout France; a graded job classification scale on general and on industry bases; and an average maximum wage.

The minimum base wage as applied in the legislation of 1945 is the minimum hourly, weekly, or monthly wage rate fixed for the lowest category of laborers in the industry or profession. Because of the scarcity of consumer goods, the black market, and the fact that the retail price index measured only official prices, the minimum base rates could not be scientifically fixed in 1945. An attempt was made, nevertheless, to set rates which would provide the purchasing power of 1939.

The wage zones defined by the committees and subsequent legislation in 1945 represent an effort to adjust wage rates to regional variations in the cost of living and, to a less degree, to geographic locations of the various industries. Regional wage zones have long been a feature of the French wage structure; they were established temporarily by the Minister of Armaments during World War I and were incorporated in collective agreements in the 1930's; after World War II, 14 wage zones were defined. Within these zones, minimum wages were fixed at rates 5, 10, 15, 20, and 25 percent lower than rates in the first (Paris) zone.

The graded job classification scales which the Minister of Labor instructed the committees to establish, were to contain, whenever possible, the following five job classifications: unskilled laborers (*mancœuvres ordinaires*); heavy laborers, and specialized laborers (*mancœuvres de force et spécialisés*); semiskilled operatives (*ouvriers spécialisés*); skilled workers (*ouvriers qualifiés*); and highly skilled workers. Starting at 100 for the ordinary laborer's wage, each job was assigned a coefficient above 100, indicating the wage differential based upon degree of skill, length of training, complexity of tasks, and other factors connected with the particular job. Jobs in the specialized laborers' category generally received coefficients ranging from 108 to 118; semiskilled operatives' jobs received coefficients from 120 to 138; coefficients of 140-180 and sometimes 200 were set for the skilled and highly skilled workers. When these detailed scales had been agreed upon by the appropriate committee, for each industry, the Minister put them into effect by decree.

One of the devices adopted in France during World War II to help stabilize wages, costs, and prices was to limit the total wage bill and the average wage paid workers of the same category in any enterprise. The decree of November 10, 1939 (as amended by decree of June 1, 1940), for example, required that the average amount of the wages paid in each enterprise to workers of the same category could not exceed the average paid the same group on September 1, 1939. Later legislation provided that the total of hourly wage payments divided by the number of workers could not exceed an average minimum fixed by decree. The legislation of 1945 varied these principles slightly and required that the difference between the minimum hourly wage rate and the average maximum wage could not be more than a fixed percentage. This was first set at 7.5 percent, and after June 1, 1945, at 15 percent, except for laborers in metallurgy and metal fabrication where the differential was 20 percent. For piece workers, the differential was also 20 percent. These differentials were not changed by the general wage-increase law of July 29, 1946, mentioned below.

Stabilization Program, 1946-47: The enlarged money wage income and the high rate of Government expenditure necessary for postwar reconstruction put an amount of money into circulation far exceeding the existing capacity of the French economy to turn out consumer goods, handicapped as it was by property destruction, old equipment, and coal and power shortages. To counteract the resultant upward pressure on prices, the French developed an extensive, and eventually very complicated, system of price control.

Enforcement has been singularly difficult in France, not only because of the wartime habit of evading economic regulations imposed by the occupation authorities, but also because the urban scarcity areas have close family ties with rural producing areas. Unsatisfactory enforcement encouraged the growth of the black market in late 1945 and in 1946, at the same time that the impossibility of investigating thoroughly the thousands of requests for price increases led to the legalization of higher and higher prices.

Stabilization was the professed Government wage policy throughout 1946. Wage incentives,

however, were permitted, in order to stimulate production and raise earnings. The Government was depending upon increased production and subsequent cost reductions reflected in lower prices to raise the level of real wages.

Organized labor supported this stabilization policy, during 1946, urging greater production, longer hours, and more effective price control. Legislation standardizing pay for work beyond the legal 40-hour base week was passed in early 1946. Although the majority of labor disputes were caused by wage demands, strikes were few and brief. However, as price control was ineffective and prices continued to rise, rank and file discontent forced labor-union congresses to demand wage increases. In June 1946, the General Confederation of Labor advocated a general increase of 25 percent, and the Catholic Confederation of Christian Workers an even greater increase, including family allowances. A special tripartite National Economic Commission in July concluded that a 25-percent increase possibly could be absorbed, if inefficient control of prices and distribution were reformed, and production programs would stress utility goods so as to force down prices of consumer goods.

Although the Government did not accept the Commission's conclusions, wage increases averaging about 18 percent were authorized on July 29, 1946. Other increases in earnings were provided for by the clauses of the legislation which raised family allowances about 25 percent. (On August 22, a new Family Allowance Law raised the rate again and so widened the coverage as to result in an over-all increase in family allowances of approximately 90 percent.)

Price rises were authorized even before the price-freeze date agreed upon (September 20, 1946), and when the wage increases went into effect further price rises occurred. Although worker discontent was growing, the General Confederation of Labor ostensibly supported the Government stabilization program,⁷ and trade-unionists organized local price-control committees. On December 30, 1946, the General Confederation adopted a new plan

⁷ When collective bargaining was restored by law in December 1946, the Government retained control over wage fixing (for detail see, *Monthly Labor Review*, June 1947, p. 1024). However, the advisability of continuing Government control over wages was under discussion in the Cabinet in the early summer of 1947. In July 1947, the labor unions and the employers' association were reported to be negotiating directly on wage and other issues, subject to Government approval.

to meet local wage demands: a "minimum living" wage, which would be adjusted currently to current prices paid by workers for food, clothing, lodging, service, etc. The minimum demanded, effective January 1, 1947, was to be not less than 7,000 francs monthly for a 48-hour week.

During 1947, the Blum and later the Ramadier Governments attempted to hold wages steady and cut prices. The "shock" of the 5-percent price reduction announced by Leon Blum, January 1, won support for the Government program, although prices did not drop appreciably. But the second 5-percent price cut (in March) failed to achieve the salutary psychological effect of the first. Food supplies for the larger towns did not show the expected increase in the spring and, although production indexes had risen during the year, the rise was not enough to overcome the extreme shortages. The position of the wage earner steadily deteriorated.

Wage Increases: Within a month after the second price reduction, the Government had to meet half way labor's demand for a minimum living wage. Legislation of March 31, 1947, advanced "abnormally low" wage rates to 7,000 francs monthly on the basis of a 48-hour week in the first (Paris) wage zone, with corresponding increases in other zones, and granted an increase in family allowances.

In spite of these concessions, strikes multiplied in number during May and June 1947, culminating in a nation-wide railway strike. Thus, a 2½-year period of comparative industrial calm was finally broken. The strikes could be settled only by granting considerable (though disguised) wage increases. At first the Government agreed to production bonuses (which were to be fixed by agreement between labor and management), a slightly more generous minimum living wage, and

tax exemptions for incomes under 84,000 francs. But in the railway settlement definite wage and family-allowance increases were granted. By (1) affording a basis for a new rise in prices and (2) creating additional deficits in State-owned enterprises, such as the railways, these strikes, and the resulting wage increases, marked a serious set-back in the effort to control inflation.

In June, the Government endeavored to put through a plan for decreasing national expenditures by removing subsidies and allowing the consumer to bear the burden of increased prices.

Subsidies amounting to 85 billion francs in 1945 and an estimated 89 billion francs in 1946 had been paid out by the French treasury in an effort to keep down prices, especially to consumers. While the principal subsidies were granted to compensate for the higher cost of agricultural and industrial imports, there were also heavy expenditures for the purpose of lowering the prices of domestic wheat, milk, coal, gas, electricity, and transportation. A reduction in these subsidies was considered essential from the standpoint of public finance even before the wage increases of 1947 had added substantially to the deficit. However, although the Ramadier Government in late June won the support of the National Assembly for its financial stabilization program, including a cut of 40 billion francs in the subsidies and the consequent raising of certain prices, the measure provoked renewed strikes and demonstrations.

The wage and price developments which have been discussed in the preceding pages are closely connected with other economic and political matters. On the economic side, the most important interdependent problem is that of restoring production to higher levels. In the political sphere, the wage-price issue has moved more and more into the center of the political stage in France.

Union Agreements: Power Laundries, Cleaning and Dyeing

CLARA SORENSON¹

MOST UNION ORGANIZATION in the power-laundry and cleaning and dyeing industries has taken place in the last decade. At the present time between 35 and 40 percent of the production workers in these industries² are employed under conditions set by collective-bargaining agreements.

More than half of the organized workers in these industries are represented by the Laundry Workers' International Union (AFL). Pioneer in the field of laundry unionization, its origin can be traced to the early years of the American Federation of Labor.³

Over 15 percent of the organized workers are represented by another affiliate of the AFL—the International Association of Cleaning and Dye House Workers, chartered in 1937. Its jurisdiction, as set forth in its constitution, includes “all dry cleaners, dry cleaning spotters, dry cleaning pressers, dry cleaning checkers, dry cleaning markers, dry cleaning packers, dry cleaning wash-

ers and dyers employed in dry cleaning establishments, and all other persons employed in dry cleaning establishments who work on dry cleaned garments.”

The Amalgamated Clothing Workers of America, an affiliate of the Congress of Industrial Organizations, entered both the laundry and cleaning and dyeing fields in 1937 and now represents over 30 percent of the organized workers through agreements negotiated by joint boards and directly affiliated locals. Much of its strength is concentrated in the New York City area.

The power-laundry and cleaning and dyeing industries overlap to a considerable extent, and for this reason are discussed jointly. From the standpoint of receipts, employment, and pay roll, power laundries are the most important of the two types of services. According to the 1939 Census of Business, female employees constituted about 65 percent of the working force in laundries. On the other hand, almost 60 percent of the employees in cleaning and dyeing plants were male.

Coverage

This article is based on an analysis of 33 agreements covering approximately 65 percent of the total production workers employed under union contracts in effect during all or part of 1946. In some instances a contract includes within its scope workers in both the power-laundry and cleaning and dyeing industries. In other cases, separate contracts negotiated by the same union cover workers in these industries separately.

All the agreements analyzed either were negotiated with employer associations or were “form” agreements signed by all the plants organized by the union in a particular city. In over 80 percent of the agreements an association signed or was referred to in some manner.

The large variety of provisions found in these agreements do not fall into a definite industry pattern. This is due primarily to the wide geographic distribution of the industries, the organization of most of the production workers by three competing unions, and the comparatively recent extension of unionization in these industries.

All production workers or all “inside” employees are usually covered by the agreements. Some, however—chiefly those of the Amalgamated Clothing Workers of America (CIO)—also include other

¹ Of the Collective Bargaining Division in the Bureau's Industrial Relations Branch. A more complete report including illustrative clauses and full text agreements will appear in a forthcoming bulletin.

² A precise employment figure is not available because of a change in definition for these industries from “wage earner” to “production worker” in the employment series published by the Bureau's Employment Statistics Division. On the basis of indexes in the series, however, it is estimated that there are approximately 300,000 production workers in these two industries. New employment series are being prepared.

³ As far back as 1893 a federal local union which organized laundry employees was represented at the convention of the American Federation of Labor. From this nucleus, the Shirt, Waist, and Laundry Workers' International Union became a chartered affiliate of the AFL in 1900. Nine years later, the union adopted its present name and waived jurisdiction over all shirt, shirt-waist, and collar and cuff cutters and operators and retained authority over none but “custom laundry workers.” In 1916, however, jurisdiction was extended to include cleaning, dyeing, and pressing done in laundry establishments.

employees, such as routemen, drivers and helpers, solicitors, maintenance men, and store clerks. For the purpose of this report, however, only provisions covering production workers have been included in the analysis. Some agreements specifically exclude certain groups, such as office and clerical workers, watchmen, executives, and supervisory employees.

Union Recognition

As a condition of employment, 30 of the 33 agreements, covering 95 percent of the workers in the sample, require union membership of all employees. Under these agreements an employee must be a member of the union at the time of hiring or join within a specified period and remain in good standing throughout his period of employment. In addition to the requirement of union membership, 27 of these 30 agreements stipulate that the employer hire through the union except when the latter is unable to furnish qualified employees within a specified time. The other 3—union-shop agreements—allow the employer to hire without regard to union membership provided the new employee agrees to join within a specified period after being hired.

Three agreements, covering less than 5 percent of the workers, provide for maintenance of membership for employees who were members of the union when the agreement was signed, or who become members during the term of the agreement.

Twenty-two agreements, covering over 85 percent of the workers, contain provisions for the check-off of union dues. Automatic check-off is provided in 19 agreements, and check-off by individual authorization in 3 others. Under the terms of another agreement the employer agrees to honor written requests for check-off of dues, but the "union agrees not to ask the employer to institute this collection unless all of the employees covered by this agreement are included." Employer assistance in the collection of delinquent dues is provided in 2 other agreements.

Union representatives are allowed access to the plant during working hours under the terms of 24 agreements; 13 further require that the employer be notified on entry or that his permission be secured. Access to time cards and pay-roll records is permitted by 15 agreements, but is limited in 3 to grievance cases, and in 2 others

an order of the impartial chairman is required. Several specify that the records may be examined only in the presence of the employer or his representative.

Wage Provisions⁴

Hourly wage rates for the different job classifications are listed in 29 of the 33 agreements. Piece-work rates are also contained in 5 of the 29 agreements and 24 stipulate that the wage scales are minimum. The hourly minimum rates (or the rate for the lowest paid occupation listed, if no minimum is specified) range from 31 cents in a southern city to 77 cents on the West Coast: 3 are below 45 cents, 7 between 45 and 50 cents, 3 between 50 and 55 cents, 3 between 55 and 60 cents, 4 between 60 and 65 cents and 4 (on the West Coast) between 75 and 77 cents. In the 5 agreements which do not specify whether the rates in the wage scale are minimum, the lowest hourly rate in one is 28½ cents (for a southern city); in another, 50 cents; in a third, 55 cents; and in the other 2, over 60 cents.

Of the 4 agreements which contain no occupational wage listings, 2 specify a minimum guaranteed weekly wage rate for females which amounts to an hourly minimum of 60½ cents in one, and 62 cents in the other. Another has a starting rate of 50 cents for females and 55 cents for males, and the fourth agreement has wage rates for two occupations, with no starting rate given, but 45 cents an hour is to be paid after 30 days.

Interim Wage Adjustments: Ten of the agreements provide for the adjustment of wages during the life of the agreement. Seven of these specifically provide that any disagreement over a revision of wage rates may be referred to arbitration.

All 4 of the New York City agreements, in effect for a 2-year period, permit wages to be reopened once during the term of the agreement. The 2 covering cleaning and dyeing employees allow the union to request reopening by serving 30 days' notice prior to the end of the first year. They also provide that, in the event maximum hours of labor are fixed by law at less than 40 hours a week, there is to be a corresponding increase in the minimum hourly rate of wages.

⁴ For a more detailed discussion of wages in power laundries, see *Wage Rates in Power Laundries*, Spring of 1943, Monthly Labor Review, January 1944 (p. 157); and *Power Laundries*, 1945, Bureau of Labor Statistics (Wage Structure Series 2, No. 18), September 1946.

The 2 covering laundry workers allow either party to request a revision of wages as of a specified date in the event of a change in the cost of living and (in one of these agreements) in the event of changes in economic conditions in the industry or generally.

One agreement, in effect for a 6-year period, allows wages to be reopened at the expiration of each 2-year period.

Two others, in effect for a 1-year period, allow the wage question to be opened on 30 days' notice in event of a "change" or a "substantial increase" (respectively) in the Bureau of Labor Statistics "cost of living" index. One agreement, which continues indefinitely beyond the original 1-year term unless reopened on 30 days' notice, specifies that if opened on the question of wages, adjustment shall be made on the basis of the percentage increase in the cost of living which occurred during a specified period.

The 2 remaining agreements, which continue in effect from year to year, allow reopening on 60 days' notice after the occurrence of an emergency affecting existing conditions. The wage-and-hour provisions are also subject to reopening when conditions, based on the normal average total sales volume and the cost of production, warrant an adjustment. ■ ■

Incentive Systems and Piece Work: No detailed wage-incentive plans are contained in any of the 33 agreements. Twelve contain no reference whatever to piece-work, bonus, or incentive plans. Four definitely prohibit piece work, and one has been amended to eliminate the piece-rate schedule from the master contract except for those companies now having the schedule in operation. Another agreement provides that "piece work, as such, shall not be established or maintained in any plant; however, any form of bonus system maintained or established by an employer must guarantee to employees the minimum base rate of pay established by the agreement."

In another case, it is provided that no merit, bonus, piece-work, or incentive system can be instituted until the union has been given written notification. Where sound engineering principles and practices have not been employed, the union has the right to object to, or reject, the plan. If, after approval by the union and a 3-month trial period, the plan is rejected by a majority of full-

time employees, it can be discontinued at the request of the union.

The other 14 agreements either contain piece-work rates or make some reference to piece work.

Weekly Guaranty: About half of the agreements contain some form of work guaranty. The majority of these provide for either a guaranteed workweek or weekly wage. In most instances the work guaranty corresponds to the number of hours in the scheduled workweek. Some of the agreements limit the guaranty to a certain percentage of the work force; one covering both laundry and dry-cleaning operations limits it to the dry-cleaning department alone. Under another agreement, the employer pledges to try to provide 40 hours' work per week.

Four agreements specify a guaranteed weekly wage, two for female employees only (regular male employees are guaranteed 40 hours' work); another specifies a full week's pay based on 48 hours for employees who work 35 hours in a 6-day period; and the third, a specified minimum amount for employees who report for work 4 or more days in any week.

Some agreements waive the guaranty during holiday weeks and during weeks when a full week's work cannot be furnished because of machinery break-down or through no fault of the employer.

Technological Displacement and Dismissal Pay: Only the 4 New York City agreements make reference to severance pay for employees displaced by technological changes. The 2 covering cleaning and dyeing firms empower the impartial chairman, at his discretion, to award severance pay to employees displaced by changes in operations, with consideration given to length of service and other pertinent factors. Under the 2 agreements covering laundry firms the employer agrees to provide equivalent employment in the plant for workers displaced by the installation of a new type of machinery. If such employment is not available, however, the union may submit to the impartial chairman the question of whether or not the displaced employees are entitled to severance pay and the amount. One of the four agreements further provides that if a part or whole of an employer's business is merged or sold, the purchaser shall be responsible for any

severance pay still owing the displaced employee because of an agreement between the union and the employer or under an arbitration award.

A fifth agreement merely says that if new machinery is adopted which displaces an employee, it shall be the policy to engage such worker for the operation of the new machines at not less than the rate paid him at the time of adoption of such machinery, provided he can perform the job or be trained to do so.

Call Pay: In over four-fifths of the agreements examined, workers receive payment for a minimum number of hours if they report for work without having been notified that no work is available. Most of these agreements specify 4 hours' pay. One provides for 2 hours' pay, and another specifies 5 hours' pay (except on Saturday when 4 hours' pay is required). Exceptions are found in 4 of the agreements providing 4 hours' pay. Under 2, new employees are guaranteed 3 hours' pay for reporting, and in the other 2 the 4 hours' pay applies only to women and minors (with other employees receiving 3 hours' pay). Pieceworkers, under one agreement, are also granted 4 hours' pay at not less than their guaranteed minimum hourly rate.

Five agreements specify that the provision guaranteeing minimum call pay does not apply if lack of work is due to mechanical break-down or conditions beyond the control of management, although 1 agreement stipulates 2 hours' "show-up" pay if lack of work is due to mechanical difficulties. One of the five also states that the provision is not applicable if the employee was not at work the preceding day. The provision does not apply in still another of these agreements if total hours worked during the week equal 40 hours in the dry-cleaning department and 45 hours in the laundry department.

Job Transfer Rates: Almost all the agreements contain provisions protecting an employee's earnings in the event of a temporary transfer from one position to another, or if required to do work of more than one classification. About half specify that if the transfer is to a higher rated position payment is to be made at the higher rate, but if to a lower position the employee is to continue to receive his regular rate of pay.

Shift Provisions: Although several agreements mention shifts, only one definitely provides for a second shift, between the hours of 6 p. m. and 5 a. m., and specifies a differential of 5 cents an hour for employees on that shift. One agreement specifies that regular day workers must work 44 hours a week before anyone is employed at night, qualified day workers to be given preference over new employees for night work. It further stipulates that women working after 6 p. m. are to receive a premium of 6 cents an hour above the day rate for all hours worked, irrespective of whether total hours are after 6 p. m. Another specifies that employees working on the night shift shall have the right to exercise their seniority on the day crew if the night shift is discontinued.

Four agreements set forth the hours and pay arrangements in the event night shifts are added.

Hours and Overtime

The basic workweek in the laundry and dry-cleaning industries ranges from 40 to 54 hours. Over half the workers under the agreements analyzed (including all the agreements sampled on the West Coast) have a standard workweek of 44 hours or less. Some of the agreements allow longer straight-time hours for men than for women; others, which cover both laundry and dry-cleaning operations, provide different standards for these two departments.

The basic workweek provided in the agreements analyzed and the number of agreements under each category, with the percentage of workers covered are as follows:

	Number of agreements	Percent of workers
Basic workweek of—		
40 hours.....	13	19
44 hours ¹	6	34
45 hours.....	2	7
48 hours.....	4	23
54 hours.....	1	3
44 hours: Women.....	3	7
48 hours: Men.....		
40-hours: Dry-cleaning department.....	2	2
45 hours: Laundry department.....		

¹ Two of these agreements allow a 2-hour tolerance for men before overtime pay starts. During the second year of these 2-year contracts basic weekly hours after which overtime is paid are to be reduced from 44 to 40 for women and 46 to 42 for men.

Basic workweek of—Continued	Number of agreements	Percent of workers
46 hours: Laundry department.....	1	1
46½ hours: Dry-cleaning department.....		
Various hours ²	1	4
Total.....	33	100

² Hours are mentioned only in the overtime provisions as follows: Dry-cleaning department, overtime starts after 48 hours the first year and after 44 hours the second; laundry department, after 48 hours for women and 50 hours for men during the second year of the contract. No reference is made to hours or the overtime standard for the laundry department during the first year of the contract. In this 6-year agreement the hours and overtime provision may be reopened biennially.

Most of the agreements establishing a workweek of 44 hours or less provide for a basic 8-hour day. In the agreements which have a standard workweek in excess of 44 hours, the workday ranges from 8 to 12 hours. Usually these agreements stipulate the maximum number of hours which may be worked in any 1 day without the payment of overtime. In some agreements the length of the workday is uniform throughout the week, and in others it varies. In some instances a longer day is scheduled for men than for women.

The overtime rate for work in excess of the regular daily or weekly hours is uniformly time and a half. In some cases, a tolerance of 2 hours is allowed beyond the normal workweek before the overtime rate applies. With but few exceptions overtime is calculated on either a daily or a weekly basis. In the excepted cases it is calculated only on a weekly basis.

Specific provisions governing hours of work for women are contained in 8 of the 33 agreements. Five limit these to 8 hours, and 1 to 10 hours a day; another, to 48 hours a week; and the eighth, to work performed before 10 p. m. Two of the agreements which provide an 8-hour day for women contain other provisions regulating their hours. One exempts women from these hours if they are granted a State permit. The other restricts those under 18 from working before 7 a. m. or after 6 p. m. and also prohibits them from working more than 6 continuous hours without a rest interval of 45 minutes (except that work may be performed for 6½ continuous hours if it is completed by 1:30 p. m.).

Week-End Work: References to Saturday work are found in about a fourth of the agreements studied. All of these specify payment of time and a half for work performed on Saturday.

Penalty rates for work on Sunday are provided in 25 of the 33 agreements analyzed: five at time and a half, 18 at double time, and 2 at double time unless a legal holiday follows or precedes the Sunday—in which case the rate for Sunday is time and a half.

Only 1 agreement mentions work on the seventh consecutive day and provides a double-time rate for such work.

Vacations

Paid vacations after a qualifying period of service are found in 31 of the 33 agreements analyzed. Eighteen have graduated plans allowing 1 week's vacation after 1 year's service and 2 weeks' after 5 years' service. A single vacation period of 1 week after 1 year's service is provided in 13 agreements. Vacation pay in lieu of vacation is allowed in 5 of these agreements, and prohibited in 2 others.

One agreement makes no mention of vacations, and the remaining agreement provides a week's vacation without pay for employees having 2 years' seniority.

In addition to the length of service requirement, 5 of the agreements stipulate a specified minimum amount of time that an employee must have worked to qualify for a vacation with pay. Two require a minimum number of hours—one 1,600 hours and the other 1,900—and 3 require 39, 40, and 50 weeks, respectively.

Vacation pay is computed on the basis of average weekly earnings in 13 agreements; in 9 others it equals the number of hours in the standard workweek times the employee's regular hourly rate. Eight agreements merely state that vacations are "with pay" and make no mention of the method of payment. In 1 agreement vacation pay is based on 2 percent of annual earnings. One agreement allows payment of 1½-weeks' pay for the 1 week's vacation after 4 years' service, with the employee being permitted to take an additional week at his own expense. Another agreement also permits the employee to take an additional week at his own expense.

Holidays

Pay for holidays not worked is stipulated in about half the agreements, with the number of such holidays ranging from 4 to 7 and the majority

providing 6 paid holidays. Most of these agreements specify the payment of double time if work is performed on designated holidays, and 2 stipulate triple time.

The remaining 17 agreements specify observance of holidays, but do not state whether they are paid for if not worked. Fifteen list 6 holidays; two mention 7 holidays. Seven of the 17 provide time and a half, and 10 double time, for work performed on the holidays.

Sick Leave

Only 1 agreement provides for paid sick leave, specifying 5 days' sick leave each year after 1 year's employment. Sick leave not used during the year is regarded as additional vacation with pay, except where an employee is entitled to 2 weeks' vacation, in which case the employer has the option of granting unused sick leave as additional vacation or of compensating the employee. One other agreement provides that vacation time may be used as sick leave.

Seniority Rules

The seniority principle is recognized in 19 of the 33 agreements analyzed. It is applied by department in 7 agreements, by plant in 6, by job classification in 4, by company in 1, and is limited to 1 classification only in another agreement. Of the 19 agreements, 7 apply seniority to lay-off, rehiring, and promotion; 7 to lay-off and rehiring only; 1 to promotion only; and 4 give no indication of the application of seniority.

Seniority in Lay-off and Rehiring: Fourteen of the agreements recognize seniority in lay-off and rehiring. In 6, department seniority prevails, with 1 stating that all nonunion employees are to be laid off before any union employees are affected. Lay-off and rehiring is by seniority based on classification in 2 other agreements, with the provision that if reduction is carried to the point where more than one classification is combined in one job the employee with the longest service in either classification is retained. Plant-wide seniority is the basis in 5 agreements, with 1 providing that knowledge, training, and ability are given next consideration, then physical fitness. The remaining agreement provides for lay-off and rehiring

based on company-wide seniority where ability and efficiency are relatively equal.

Work sharing as an alternative to lay-off or combined with lay-off is provided in 6 agreements.

Seniority as a Factor in Promotions: Only 8 of the agreements refer to seniority in connection with promotions. Usually seniority is the determining factor, with qualifications considered in most cases.

Reemployment Rights of Veterans: Clauses protecting the seniority and reemployment rights of employees after discharge from military service are found in about half the agreements. Six specify that seniority shall accumulate during the period of service, and 5 assure the employee of reinstatement to his former position "without loss of seniority." Two others allow reinstatement to the former position with all rights and privileges at the time of entry into service, plus all additional rights and privileges established by the agreement in force at the time of reinstatement. Two agreements specify reemployment with all "increments" which have accrued to the position.

Learners and Apprentices

Conditions for training inexperienced workers to become proficient on the job are stipulated in 31 of the 33 agreements. Four of these merely specify a 4-week trial or training period for new or inexperienced employees. The term of apprenticeship or training is mentioned in all but 2 of the remaining agreements, and varies from 2 weeks for a single classification in 1 agreement to 12 months for some classifications in 3 others, with several providing varying periods for different occupations and departments.

The agreements which specify shorter learning periods, such as 4 to 10 weeks, generally provide a rate below the regular wage scale for the full period of learning and thereafter the regular rate; whereas the agreements having longer periods—90 days, 4 months, 6 months, and a year—provide for wage increases at specified intervals until the journeyman scale is reached.

Ten of the agreements limit the number of apprentices in a plant by specifying the ratio of apprentices to journeymen.

Health and Safety

A wide variety of clauses relating to health, safety, sanitation, and ventilation are found in the 19 agreements with such provisions, but these safeguards are usually phrased in general terms and refer to minimal health and safety standards. A number specify that sanitary and healthful working conditions including adequate ventilation shall be maintained, or that safety devices shall be provided, or that State safety standards shall be observed. About half of these agreements require the employer to provide comfortable and sanitary dressing facilities. Some agreements require the employer to furnish such items as first-aid kits, sanitary drinking facilities, cooled drinking water, and electric fans.

In some agreements, provision is made that women may not be used on specified heavy operations such as tumbler work, or do any cleaning or help in the operation of any dry cleaning machine, or lift loads in excess of 35 pounds.

Rest Periods: Six of the agreements have provisions for paid rest periods. Five others which provide rest periods of 10 minutes each morning and afternoon (4 throughout the year and the remaining agreement for the months of June, July, and August only) do not state whether the time is paid or unpaid. Another also has a clause saying that no employee is required to work more than 5½ hours on any day after 1 p. m. without a half-hour rest period.

Health and Welfare Plans

The 4 New York City agreements provide for employer contribution to an insurance fund "for the purpose of furnishing life, accident, and health insurance and such other forms of group insurance for medical care and hospitalization as the trustees may reasonably determine." One agreement covering workers in New Jersey establishes an employer-financed, union-administered welfare fund. The agreement covering workers in San Francisco states that the parties agree in principle on employee hospital and health benefits, and that they will continue investigation for the purpose of arriving at a mutually satisfactory plan to be incorporated in the agreement. The two New York agreements covering cleaning and dyeing employees, in addition to the insurance fund, also

provide for a health service financed by the employer and jointly controlled by an industry committee consisting of equal representation from the union and the association.

Adjustment of Disputes

All 33 agreements provide some method of settling labor-management disputes. In 28 agreements, some form of plant grievance machinery is provided and, in all but 5 of these, final settlement is made through arbitration. Of the 5 agreements which have no inplant grievance machinery, 1 refers disputes directly to a tripartite arbitration board, and the other 4 directly to boards of equal representation with the proviso that another member is to be chosen "if necessary."

Over half the agreements define grievances in broad terms, such as any matter in dispute, and any differences, complaints, or matters in controversy; in addition, a few also consider matters of dispute not specifically covered by the agreement as coming within the scope of the grievance procedure. The remaining agreements in the sample, and a few of those which have a broad general definition, define grievances as any disputes arising out of the interpretation or application of the agreement or any of its terms.

Grievance Procedure: Only a few of the agreements provide a detailed step-by-step procedure for the handling of grievances. An initial and a final step are specified in the majority, with several providing only one step before submission to arbitration.

The final step of the grievance procedure calls for a bipartisan "board" or "committee" in 15 agreements, and a single representative of each party in 10 others. Of the 15 agreements, 6 provide for 2 representatives from each party on the board, and 6 provide for 3; and 3 agreements do not specify the number of representatives on the committee.

As the final step of the grievance procedure before referral to arbitration, one agreement provides that the business representative of the local "shall endeavor to settle the matter in controversy in a manner satisfactory to both parties," and another calls for referral to the Conciliation Service of the United States Department of Labor at this stage. In a third agreement the sole

reference to grievance settlement before arbitration is a statement that the company agrees to "recognize a shop steward and grievance committee."

Eight of the agreements impose a time limit on the period allowed the committee or board to settle the grievance before submitting it to arbitration. In 6 cases the period ranges from 1 to 10 days, in the seventh agreement, one meeting is specified and in the eighth two daily consecutive meetings.

Five agreements, with boards or committees of equal representation, do not provide for arbitration. In 2 of these agreements, the board is designated as the final court of appeal; and it is further given the authority to meet and reach agreements in connection with any emergency that conditions may impose either during the national emergency, in the 1 case or during the reversion period in the other. All 5 specify that a decision must be reached in 10 days from the time the controversy is submitted by either party.

Arbitration: Referral to arbitration of all disputes not settled through the regular grievance machinery is allowed under the terms of 28 agreements. Arbitration may be initiated at the request of either party in all but 1 of these, which requires mutual consent. Over two-thirds of the 28 agreements mention specific points which are included within the scope of arbitration. Discharge cases, disagreement over the terms of a new agreement (5 agreements), disputes concerning general terms not specifically covered by the agreement, inability to agree on new wage rates emanating from changes in machinery or method, and disagreement on the wage adjustment allowed under the wage reopening clause, are some of the items specifically mentioned.

The structure of the arbitration machinery varies in the 28 agreements providing arbitration: 18 specify arbitration boards consisting of an equal number of representatives, chosen by each party, who select the impartial member; and 9 (including the 4 New York and 2 of the Chicago agreements) provide for an impartial arbitrator to settle disputes. In 7 of the latter group, a permanent arbitrator is appointed for the life of the agreement; in the other 2, the arbitrator is selected at the time of the dispute. The State board of

conciliation and arbitration is designated as the arbitrator in all disputes under the terms of the remaining agreement.

The arbitration decision in 11 agreements must be rendered in a specified time limit, ranging from 2 to 15 days. Two of these, which impose a time limit of 10 days for other disputes, stipulate that, in cases of discharge, the decision is to be rendered in 1 week. Two other agreements which do not have a time limit on other disputes give precedence to discharge cases and require a decision within 48 hours after the union demands a hearing, unless the time is extended by mutual consent.

The arbitration decision is final and binding by specific provision in all but 1 agreement, which specifies that the arbitrator's decision shall "govern."

Discharge and Quits

Of the 33 agreements studied, 22 recognize the employer's right to discharge for "just" or "proper" cause; 2 others prohibit discharge until after a joint investigation by representatives of each party. A few agreements mention specific causes, such as 2 days' absence without notice, violation of shop rules and regulations, intoxication, dishonesty, inefficiency, and insubordination or lack of effort after a warning notice to the employee and steward. A few also accept the employer's right to dismiss a new employee during the first weeks of employment. Suspension for assault or scandalous conduct pending trial by the impartial arbitrator is provided in 1 agreement.

The union, in 13 agreements, is permitted to investigate discharges, and may, in 9 of these and 4 others, appeal to the arbitration machinery. In 1 agreement the dispute is referred to the Conciliation Service of the United States Department of Labor. If the discharge is unjustified, 6 agreements specify reinstatement and payment for time lost, with one of these limiting payment to 2 weeks.

Quit Notices: Six agreements require 1 week's notice of an employee's intention to terminate employment. The notice in one of these is required after 30 days' employment, and in another, after 6 months. One agreement permits exceptions to be made by mutual consent of the business agent of the union and the employer.

Strikes and Lock-Outs

Restrictions on strikes and lock-outs are contained in 30 of the 33 agreements, but 11 of these specify conditions under which strikes and lock-outs are permitted.

Continued operation while negotiating a new agreement is provided for in 4 agreements by forbidding strikes and lock-outs during that period. If the union decides to resort to strike action on the failure of the parties to negotiate a new agreement, 2 others specify that such strike call will not be effective until after 3 days' notice to the employer, during which time no laundry will be collected but processing and delivery of laundry will continue.

Duration of Agreements

Twenty-one agreements, covering approximately 30 percent of the workers in the sample, are effective for 1 year. Eighteen of these are automatically renewable for successive yearly periods, unless advance notice of desire to change or terminate is given. This period of advance notice ranges from 30 days in 10 agreements to 45 days in 1 agreement, and to 60 days in 7 agreements. Three agreements have no definite renewal period but continue automatically, after the 1-year period, until 30 days' notice of intention

to change or terminate is given.

Eight agreements, covering over half of the workers in the sample, are in effect for 2-year periods. Five of these are automatically renewable for yearly periods thereafter unless 60 days' notice of desire to change or terminate is given. Three contracts expire at the end of the 2-year period: 1 provides that the terms of the new agreement shall be discussed before an impartial arbitrator 30 days prior to the expiration date; the second specifies that "30 days prior to the expiration of this agreement, the union shall submit to the association, in writing, terms and conditions for a new agreement to take effect upon the expiration hereof;" and the third makes no reference to the renewal of the agreement.

Two agreements were to be in effect from January 1944 until 6 months after cessation of hostilities.

Another agreement, which is to run for approximately 2 years and 5 months, contains provision for automatic yearly renewal unless notice of a desire to change or terminate is given by a specified date, which is approximately 60 days prior to the expiration date. A fourth agreement is in effect for a 6-year period, but wages, vacations, hours of work, and overtime pay may be renegotiated biennially upon 30 days' notice by either party prior to the biennial reopening date.

Guaranteed Employment Plan of Seaboard Railroad¹

JOHN L. AFROS²

A CONTINUITY OF EMPLOYMENT or minimum force agreement, whereby an average of about 2,500 repair and equipment maintenance workers currently have year-round job security, was inaugurated by the Seaboard Air Line Railroad in 1928. The plan, unique in the railroad industry, was negotiated between the management and the Federated Shop Crafts (System Federation No. 39, Railway Employees' Department, AFL). Six shop crafts—machinists, boilermakers, blacksmiths, sheet-metal workers, carmen, electrical workers, their respective helpers and apprentices—and coach cleaners, in all of the company's 58 repair and maintenance shops, were subject to the plan in 1946. In the 19 years in which the plan has operated, the designated number of employees in the minimum force has reached its highest peak in 1947.

Seasonality has marked the operations of the line, in both its passenger and freight traffic.³

¹ This account of the Seaboard Air Line Railroad's Continuity of Employment Plan is based on interviews held with management and union officials and with employees in connection with the field survey of guaranteed wage and employment plans which the Bureau of Labor Statistics made for the Advisory Board of the Office of War Mobilization and Reconversion. (See Bureau Bulletins Nos. 906 and 907 for appendixes C and F of OWMR study.)

² Of the Bureau's Labor Economics Staff.

³ The Seaboard Air Line Railroad is a class I carrier (gross revenue exceeding 1 million dollars) serving the capitals, ports, principal cities, and resort areas of the Southeast. Both freight and passenger traffic fluctuate seasonally. The peak season in passenger traffic is from about January 1 to May 15; the peak movement of freight extends from October to June. Transportation operations are lowest between July and September. Operating revenues declined sharply in 1932 and after partial recovery again turned downward during the 1938 recession. During the war years, net operating revenue rose far above prewar levels. Troop movements had increased passenger traffic abnormally. From December 1930 to August 1946, the company had been in receivership, with no noticeable effect on the minimum force plan. War-time scarcities of materials naturally added to the company's operational problems but no unemployment resulted from such shortages.

Other adverse factors in the employment situation before the guaranty was introduced contributed to the negotiation of the plan. Prior to the introduction of the minimum force agreement, it had been company practice for many years to allot a monthly budget to each master mechanic and to each shop superintendent. When a shop or terminal point had insufficient funds because of unforeseen circumstances (such as a marked decline in revenues, emergency repairs, etc.) the company discharged its temporary workers. When that did not prove sufficient to meet the budget requirements, management either reduced the number of shifts or days per week, or else closed down a shop or terminal point. In some cases, repairs to equipment, other than running repairs and inspection, were curtailed for considerable periods. Seniority did not protect regular employees from lay-off for a part of the year.

Another pre-guaranty practice aggravating the company's employment situation was the appropriation of substantial funds for repair work in busy seasons. This required the recruitment of part-time employees to help the regular repair and maintenance force cope with increased work loads.

The purpose of the continuity of employment plan was to eliminate extreme fluctuations in employment which resulted from inadequate budgetary provision for maintenance and repair work. With the inauguration of a minimum work force, the company in effect pledged itself to plan its work more evenly.

Origin of Plan

During the Florida boom of 1926 and 1927, the company had purchased new equipment and postponed repairs on old equipment to a later date. As a result, some of the repair shops closed down for from 1 to 3 months.

According to John S. Wilds, the then secretary-treasurer of the Federated Shop Crafts, "conditions for shopmen were so bad by midyear of 1927," that the union "thought it necessary to serve notice on the management for a wage increase." In its conferences with management, the union committee "laid great stress upon the fact that under the existing conditions [of reduced hours or reduced forces] the shopmen could not earn a sufficient amount of money to meet expenses, and that they must have either increased

wages or assurance that they would have steady employment."

During the negotiations, the inauguration of a continuity of employment plan was discussed. The union representatives expressed the belief that repair work could and should be spread over the year for all regular employees. The union also urged that the company estimate the number of men needed to perform repair work at an even pace throughout the year. If the company would agree to assure a full year's employment to a minimum force of repair and maintenance workers, the union agreed to withdraw its wage demands.

As a result of the negotiations, a minimum force agreement was signed for the year 1928. The determination of the minimum number of workers to be employed was made a matter of joint labor-management decision. The agreement provided for conferences in December of that year to discuss its extension for the year 1929. Similar agreements have been negotiated each year since that date.

According to a company spokesman, "the introduction of the plan involved no substantial risk." No additional wage costs were anticipated, since with continuous operation of repair and maintenance shops (in place of previous intermittent operation) total labor requirements would not be increased. As far as is known, there were never any negotiations for more complete coverage.

Terms of the Plan

The minimum force agreement⁴ which became effective in January 1928, guaranteed that "a minimum force of [a specified number of] positions will be continued from month to month during the entire [contract] year," at each terminal point over the Seaboard system. The minimum force was specified as 2,170 positions in 1928. Employment was stipulated as being on "the 6-day week basis," which in effect meant 48 hours per week for 52 weeks, since that was the workweek at the time. No specific wage guaranty was made, except as

⁴ The minimum force agreement operates within the framework of a general agreement but is not part of it. The existing general agreement in effect since March 1923 is similar, in its principal features, to other agreements involving shop workers in the railroad industry. (Agreements covering the mechanical trades were in effect on the Seaboard for many years prior to that time, probably as far back as the turn of the century.) The general agreement has a section devoted to general rules and specific sections pertaining to the various trades in maintenance categories subject to the plan. None of the basic provisions of the general agreement—transfer, seniority, etc.—were altered at the time of adoption of the plan.

might be implied by the employment guaranty. Wages were paid on the basis of regular hourly rates. The plan bore no relation to other earnings or sources of income.

Included among the minimum force positions were the various occupations represented by the Federated Shop Crafts: machinists, boilermakers, blacksmiths, sheet-metal workers, carmen, electrical workers, their respective helpers and apprentices, and coach cleaners. For workers in these occupations, the number of jobs in the minimum force and the workers' seniority are the only limitations determining coverage under the plan.

A separate minimum force of coach cleaners is established under the continuity of employment plan. This force may be reduced in accordance with rule 23 of the general agreement.⁵ The number of positions in other classifications, however, is not increased by a like amount.

With the exception of changes in the size and location of the minimum force, the continuity of employment plan remained unaltered during the first 2 years.

At the request of management, the 1930 agreement was modified to provide for a minimum number of positions in each classification, for the entire system, instead of a minimum number of employees for each terminal point. These positions could then be transferred from point to point and from city to city, and, in filling them, workers were to be furnished transportation by the company for themselves, their families, and household effects. Subject to seniority rules, and after agreement between the management and the union, employees could be transferred from one shop to fill vacancies in another shop. No interchange of classifications, however, was contemplated.

Following a decline in operating revenues, the 1931 agreement was modified, at the request of management, to include a clause which gave each party the right to initiate a review of the number in the minimum work force at any time after January 31. The new provision specified that if "any situation arises during the life of this agreement which would seriously affect either party, a conference will be held between the management and the general committee [of the union] for the purpose of reaching an agreement. In the event of failure to do so, it is understood and agreed that

⁵ This rule states that "when it becomes necessary to reduce expenses," the force at any point may be reduced, providing seniority governs such reduction.

either party may terminate this agreement by serving ten (10) days' notice in writing upon the other of intention to do so."

Administration of Plan

The plan is administered jointly by the management and the union. The chief mechanical officer of the company is management's representative in agreement negotiations. The president of System Federation No. 39 represents the workers on most matters pertaining to the plan, but the general committee of the Federated Shop Crafts handles the negotiations for renewal of the agreement, which are held annually (about December 1) for the following year. No central record of covered workers (by name) is maintained by the company. Insofar as seniority rules are concerned, the local shop committees perform the bulk of the administrative duties. A distribution sheet, giving the number and classification of covered positions in each shop, is a part of the minimum force agreement.

Operation of Plan

As previously stated, the basic features of the plan have been revised twice in 19 years. The number in the minimum force has been changed 13 times at the beginning of the year and 3 times in the middle of the year. One of these midyear changes (August 1940) involved an increase in the minimum force; two (1931 and 1938) involved decreases. Company and union officials point out that midyear revisions were made only when special circumstances made it necessary and were preceded by conferences between the parties, as specified in the minimum force agreement. The amended contract thus did not provide an easy release for the company from its obligation under the agreement. Based on this experience, it seems clear that the company has not attempted to invoke the emergency reduction-in-force clause arbitrarily.

During slack periods, employees not in the minimum force are laid off in order of seniority after 5 days' notice. When in any shop, further reductions have been necessary, the company's practice has been to present the situation to the workers and ask for their decision whether to lay off more men or to reduce the number of days specified in the agreement. In interviews with

employees of the Portsmouth shops, the men stated that they preferred some reduction in time to additional lay-offs. In 1930, for example, employees agreed to work only 4 days a week through June, July, August, and September. In September of that year, the management asked employees to continue the 4-day schedule through the remainder of the year. Subsequently the 6-day week was resumed.

If a worker is transferred, neither his classification nor his wage rate may be reduced.⁶ Minimum force workers can be discharged for cause, subject to grievance-machinery procedure as provided in the general agreement.

New employees are not told of the plan at the time of the hiring interviews. Its provisions are usually explained by the union representative in the shop. Workers are notified by the union upon their inclusion in the minimum force.

During the first 3 years of operation, there was little annual fluctuation in the number of covered workers (see table). By 1934, the number of workers covered by the minimum force agreement had fallen 21 percent from the level in 1928. The drop was the result of the depression of the early 1930's. Operating revenues of the company in 1934 were 41 percent lower than in 1928. The agreement for 1931 provided for 2,022 covered positions; this was reduced to 1,800 in October. The workweek was reduced to 4 days in August, September, and October, and restored to 5 days in November.

A low point of 1,725 covered positions was reached during the depression years 1933-36, inclusive, and during part of 1938. The minimum work force was maintained at a comparatively stable but low level until 1937 when a temporary 6-percent rise occurred. Operating revenues meanwhile followed a somewhat similar pattern, with the 1937 index 21 points above the extreme low of 53.7 in 1932. A decline in revenue followed during the recession year, 1938. In that year, the company requested adjustment of the agreement, and, on May 20, the minimum force was reduced from 1,850 to 1,725 positions. The agreement for 1940 was established at 1,785 positions; on August 28, the minimum force was raised to 1,835.

⁶ This requirement operates subject to the provisions for differentials as stipulated in the general agreement.

Minimum force, employment, and annual pay roll in 6 mechanical trades, and operating revenues, on Seaboard Air Line Railroad 1923-46

[Index 1928=100]

Year	Equipment maintenance employees on minimum force		6 mechanical trades ¹					Operating revenues	
			Average employment			Annual pay roll			
	Number	Index	Number	Index	Percent in minimum force	Amount	Index	Amount	Index
1923			2,471	103.6		\$4,072,434	102.3	\$52,249,110	91.3
1924			2,710	113.7		4,526,177	113.7	53,384,173	93.3
1925			2,827	118.6		4,876,258	122.5	62,864,711	109.8
1926			2,745	115.1		4,618,502	116.1	67,024,854	117.1
1927			2,134	89.5		3,739,042	94.0	61,790,150	107.9
1928	2,170	100.0	2,384	100.0	91.0	3,979,086	100.0	57,245,207	100.0
1929	2,235	103.0	2,491	104.5	89.7	4,339,446	109.1	58,151,908	101.6
1930	2,222	102.4	2,320	97.3	95.8	3,928,944	98.7	49,679,049	86.8
1931	1,967	90.6	2,119	88.9	92.8	3,476,193	87.4	42,303,665	73.9
1932	1,800	82.9	1,800	75.5	100.0	2,569,730	64.6	30,740,335	53.7
1933	1,735	80.0	1,801	75.5	96.3	2,426,913	61.0	31,549,557	55.1
1934	1,725	79.5	1,951	81.8	88.4	2,898,292	72.8	33,861,442	59.2
1935	1,725	79.5	1,968	82.6	87.7	2,992,414	75.2	35,944,811	59.3
1936	1,725	79.5	2,049	85.9	84.2	3,306,950	83.1	38,346,055	67.0
1937	1,850	85.3	2,222	93.2	83.3	3,715,782	93.4	42,790,878	74.8
1938	1,777	81.9	1,958	82.1	90.8	3,423,873	86.0	40,009,744	69.9
1939	1,775	81.8	2,046	85.8	86.8	3,728,503	93.7	44,163,420	77.1
1940	1,802	83.0	2,232	93.6	80.7	4,046,780	101.7	48,490,965	84.7
1941	1,835	84.6	2,620	109.9	70.0	5,454,760	137.1	64,608,903	112.9
1942	2,000	92.2	2,950	123.7	67.8	7,284,830	183.1	110,242,375	192.6
1943	2,300	106.0	3,170	133.0	72.6	8,203,542	206.2	137,257,803	239.8
1944	2,300	106.0	3,196	134.1	72.0	9,011,307	226.5	141,188,977	246.6
1945	2,300	106.0	3,147	132.0	73.1	8,982,114	225.7	130,210,498	227.5
1946	2,300	106.0	3,373	141.5	68.2	10,383,668	261.0	112,403,393	196.4
1947	2,500	115.2							

¹ Includes all mechanics, helpers, apprentices, and coach cleaners in the maintenance of equipment department.

² The original minimum force for these years was changed during the year; figures shown are averages for those years.

SOURCE: Annual Reports of Seaboard Air Line Railroad to the Interstate Commerce Commission, and annual minimum force agreements.

Beginning in 1939, both the number of workers under the minimum force agreement and operating revenues increased steadily. The minimum work force was stabilized from 1943 to 1946 at 6 percent above the base year of 1928. For 1943-46, inclusive, the minimum force agreement covered 2,300 positions providing regular employment for 52 weeks of 48 hours. By 1944, operating revenues had reached a peak of 147 percent above that of 1928; they dropped off somewhat in 1945.

The proportion of positions that have constituted the minimum force over the years (see table) from 1928 has ranged from 68 percent to 100 percent of the total number of workers in the covered classifications. As a company official pointed out, management tries to limit the minimum force in order to "allow for leeway during seasonal fluctuations."

Evaluation of Plan

The Seaboard line has had no strike of serious consequence among the shop crafts since 1922—a fact attributed by company officials to its labor policy. The shop chairmen who were interviewed at the Portsmouth shop expressed the view that the company has maintained a fair attitude to-

ward its workers. Despite the insertion of a safeguard or escape clause, in 1931, union officials and members interviewed stated that the existing plan is substantially as good as the original. One union official stated that the union "would do everything possible within reason and law to prevent discontinuance" of the plan.

Although the workers who were interviewed were aware of the escape clause, they did not draw much distinction between the advantages under the plan that was in effect from 1928 through 1930 and the revised plan of 1931. They apparently realized that the only "guaranty" in the existing plan was in the 10 days' notice given to the union before the minimum force might be reduced. Such notice is not ordinarily given to employees of other railroads. Union and management officials agreed that the plan contributed to the excellent morale that exists in the shops.

The interviewed employees stated, moreover, that the existing agreement has saved them from irregularity of employment and has increased their annual income. They are emphatically of the opinion that the operation of seniority alone would not have accomplished the same results. Both management and workers also asserted that

the plan has contributed to reducing the rate of turn-over, and the workers are of the opinion that the company has used its right to transfer workers from one point to another in a reasonable manner.

Management officials stated that the minimum force plan has increased worker productivity by reducing the fear of lay-offs. Existence of the plan has not noticeably eased the problem of recruitment. Company officials also agreed that even the existing plan (as modified in 1931) had acted as a check upon hasty action.

Union officials of long standing recalled that in years before the agreement was negotiated, the company frequently reduced its repair and maintenance force or closed a shop or terminal point because of lack of funds caused by unforeseen circumstances. In some cases, only an emergency force remained on duty. In busy periods, large additional forces were hired, and during part of the year, both temporary workers and

regular workers were laid off. Since the minimum force agreement has been in operation, the budget estimates have taken into account the plan to retain the agreed minimum working force throughout the year. The ability of the company to defer repair work for relatively inactive periods of operation and to estimate minimum manpower requirements over a period of a year made practical the guaranty of a minimum work force.

Great significance was attached by management and labor to the fact that the plan removed decisions concerning furloughs and lay-offs from the hands of local shop superintendents or supervisors, and that negotiations had to be carried on by management and the union at the top level. Both the management and the union stated that the plan had been advantageous for all concerned. The company saved money, productivity increased, and labor turn-over and training costs decreased. Employees' annual earnings increased and the spread of work induced greater regularity of employment and wages.

U. S. Conciliation Service, 1913-47

ON AUGUST 21, 1947, the United States Conciliation Service ended 34 years of operation as a division of the Department of Labor engaged in the mediation of industrial disputes. Under the Labor Management Relations Act of 1947,¹ the functions of the Conciliation Service were transferred to the independent Federal Mediation and Conciliation Service on that date. During the period that the Conciliation Service was in the Department of Labor, the process of conciliation and mediation became the most commonly accepted initial means for the settlement of controversies after direct negotiations between employees and employers had failed. More than 122,000 dispute cases were handled by the agency, up to the end of the fiscal year 1947.

Under the original act of 1913 which created the United States Department of Labor, the Secretary of Labor was empowered "to act as mediator and to appoint commissioners of conciliation in labor disputes whenever in his judgment the interests of industrial peace may require it to be done."² During World War I, the mediation of such controversies became so important that the first Secretary of Labor expanded the conciliation division of the Department into the Division of Conciliation and Labor Adjustment Service.

¹ Public Law 101, 80th Cong., 1st sess., approved June 23, 1947. For a summary of the law, see *Monthly Labor Review*, July 1947 (p. 71).

² Historically, the Secretary of Labor and his predecessors, as far back as 1888, were given statutory functions for the settlement of industrial disputes; until 1913, these were in connection with railway controversies. In 1888, a Federal Arbitration Act empowered the establishment of temporary Presidential investigating committees of three, one member of which was to be the Commissioner of Labor. Under the Erdman Act of 1898, which provided for the first permanent Federal agency to deal with labor disputes, the Commissioner of Labor, together with the Chairman of the Interstate Commerce Commission, were constituted an ex-officio body to mediate and conciliate in disputes between carriers and their employees, on request of either party, and to invoke arbitration if unsuccessful. (See *Monthly Labor Review*, May 1947, p. 840.)

The history of conciliation in the Department of Labor paralleled the basic changes in industrial relations. The case load of the Service, and the number of commissioners employed, fluctuated with the extent of unionization, the number of collective-bargaining agreements in effect, and the number of labor-management disputes. Only 75 disputes were handled in the first 2 years. During World War I and the postwar inflation period, unionism and the number of industrial disputes rose sharply, and the work of the Service moved with them, reaching a peak in 1919 of 1,789 cases. In that year, 4,160,348 workers were involved in work stoppages.

In the late twenties and the subsequent depression, the decline in union membership, number of contracts, and disputes was reflected in the reduced work load of the Service. For example, in 1930, recorded work stoppages throughout the country reached a low of 637, and the Service handled only 557 cases, with a staff of 35 commissioners. In the thirties, legislation, including the National Industrial Recovery Act and particularly the National Labor Relations Act, stimulated union membership and substantially increased the number of collective-bargaining agreements; and the case load of the Service rose. During World War II, unionization, number of agreements, and labor-management disputes reached the highest levels in history.

The wartime case load of the Service (from Pearl Harbor to VJ-day) increased 400 percent. The no-strike, no-lock-out pledge adopted by labor and industry leaders immediately after Pearl Harbor led to an increased use of the facilities of the Service in settlement of disputes. Executive Order No. 9017 establishing the National War Labor Board specified that the Board could not take jurisdiction of a dispute case until the Conciliation Service had first tried to resolve it by mediation. (One-fourth of the 75,000 cases handled by the Service between Pearl Harbor and VJ-day were referred to the Board.) The War Labor Disputes Act of 1943 required the filing of a 30-day strike notice in any dispute which threatened seriously to interrupt war production. On receipt of such a notice by the Secretary of Labor, the Service, as a matter of policy, immediately assigned a commissioner to the case.

With the end of the war and of the no-strike pledge and the termination of the National War Labor Board, the case load of the Service declined from the wartime peak to 18,840 cases handled during the fiscal year of 1946. The decline in this period was offset by the increased seriousness of the cases handled. The last year of the war was characterized by "quickies" and strikes of short duration, whereas the strikes of 1945-46, though actually fewer in number, were over basic wage issues and more difficult to settle. In 1945-46, the Service was called into approximately three-fourths of the 4,645 strikes in the United States, compared with one-third in 1940.

Conciliation Policies

The first Secretary of Labor, William B. Wilson, regarded the conciliation of industrial disputes as among the most important functions of the Department. He envisioned the administration of the Conciliation Service as "contemplating a development of diplomatic duties with reference to labor disputes analogous to those of the Department of State with reference to international disputes." He made it a Department rule that "fairness between wage earner and wage earner, between wage earner and employer, between employer and employer, and between each and the public as a whole [should be] the supreme motive and purpose of its activities." According to the Secretary, the important qualification of a commissioner was not "impartiality" in the sense of "ignorance or indifference to the interests of either party or both, but tact, fairness, and good feeling in negotiations in addition to competency with reference to technical aspects of the matters in dispute." Certain of his policies called for more initiative on the part of the Conciliation Service than was endorsed by later Secretaries of Labor. If conciliation was unsuccessful, Secretary Wilson published the commissioner's findings of fact in regard to wages, hours, and working conditions in an effort to bring public opinion to bear on whichever party seemed unjustifiably unwilling to compromise. When a company "not only protested against meeting committees of their workmen, but refused to accept the good offices of the Department of Labor in negotiating the difficulties," the Secretary published figures on corporation earnings showing the company's ability to pay.

Hugh L. Kerwin, Director of the Service from the time it was established until his death in 1937, emphasized the voluntary nature of conciliation: "The last thing we think of is any hint of compulsion . . . But in the end—and this point cannot be too strongly emphasized—the Government conciliator always works toward leaving the two parties who are in dispute to settle their differences between themselves."

Dr. John R. Steelman's appointment as Director in 1937 coincided with a rise in the number of collective-bargaining agreements resulting from the affirmation of the constitutionality of the National Labor Relations Act by the United States Supreme Court and extensive union-organization drives. Nearly 60 percent of the strikes in that year, some of them sit-down strikes, were for union recognition. Through addresses and articles, Dr. Steelman (1937 to 1944) undertook to publicize the work of the Service to management and labor groups in the belief that many strikes could be avoided if the parties knew of the various facilities available to them through the Service. He characterized commissioners as "strike doctors," and assured the parties that the Service was "trying to work itself out of a job" in that its aim was to educate the parties to work out their disputes independently without Government aid.

A month after VJ-day, Edgar L. Warren was appointed Director of the Service and undertook to make changes in the Service that were largely based on recommendations of the President's Labor-Management Conference³ of November 1945 and the counsel of the subsequently appointed Labor-Management Advisory Committee to the Service. Major changes included the establishment of regional Labor-Management Advisory Committees, the decentralization of the organization through additional regional and field offices, the installation of the Program Division to provide various services to commissioners, and the further development of supplemental mediation techniques, such as committees of conciliators, and a panel of 26 special ad hoc conciliators⁴ of national reputation to work on key disputes.

In addition to its conciliation functions, the Service appointed arbitrators and made job and incentive-plan studies on the request of both parties. As early as 1918, the Service appointed

³ For a summary, see *Monthly Labor Review*, January 1946 (p. 37).
For the list, see *Monthly Labor Review*, February 1947 (p. 265).

arbitrators to settle grievance disputes. In 1937, a small, separate staff of full-time arbitrators was established. In 1946, a panel of 150 arbitrators was established in lieu of the limited full-time staff and cleared for impartiality and competence by regional Labor-Management Advisory Committees. These arbitrators were to serve on call when requested by both parties to a labor dispute.

New Bureau Publications

Notes on Labor Abroad

Because of widespread public demand for information on foreign labor conditions, the Bureau of Labor Statistics has decided to make public a summary entitled "Notes on Labor Abroad," which was formerly prepared solely for administrative use within the Government.

The purpose of Notes on Labor Abroad is to provide information on foreign labor conditions to the public in concise form, as excerpts, abstracts, or summaries of recent reports received at the Department of Labor from United States

labor attaches and other Foreign Service Officers, the authorities in United States occupied areas, publications of foreign governments and foreign labor unions, and the foreign press. The Notes will be prepared at irregular intervals as sufficient materials become available to warrant publication.

Firms or organizations requiring Notes on Labor Abroad for use in their work may be placed on the Bureau's mailing list, to the extent that distribution limitations permit. The request should give the type of business in addition to the name and address of the firm or organization.

Monthly Index of BLS Publications

To meet the many requests which the Bureau of Labor Statistics receives for information concerning all economic data which it issues, the Bureau has inaugurated a monthly subject index to its publications. Articles in the Monthly Labor Review, bulletins, reprints, releases, processed reports, and other material of the past month, as well as studies in progress, are shown. A section is devoted to material of the regional offices. The first issue covers the month of June.

Summaries of Special Reports

Work Injuries and Accident Causes in Pulpwood Logging, 1944¹

LOGGING OPERATIONS are commonly recognized as being among the most hazardous of industrial activities. The general impression has been, however, that pulpwood logging is considerably less hazardous than general logging because of the smaller and lighter logs produced. In large measure the results of this survey² directly contradict that impression and indicate that pulpwood logging is no less hazardous than the production of sawlogs.

Injury Record

Frequency of injuries: Comparison between the combined injury records of 266 pulpwood logging operations and of 137 general logging operations, for the year 1944, showed very little difference in the frequency of injury in the two segments of the logging industry. The pulpwood logging group averaged 75.5 disabling work injuries for every million employee-hours worked, which differed only slightly from the average of 76.6 for the general logging group. In compiling these averages, it was necessary to exclude all logging operations in the Pacific Coast States. In that area the usual practice is to combine the cutting of pulp and sawlogs into a single operation and to cut pulpwood in regular sawmill lengths of 40 or more feet. Pulpwood logging, therefore, is no different from general logging in that region. As a result, this survey is based upon the so-called "short stick" pulpwood logging of the Northeastern, Great Lakes, and Southern areas.

Reflecting substantial differences in operating methods and in the conditions under which opera-

tions must be conducted, the injury-frequency rates³ for pulpwood logging varied considerably in the three areas included in the study. The Northeastern region had the best record with an average frequency rate of 70.3. The rate for the Southern area was 76.8, and that for the Great Lakes area was 83.1. Lending further emphasis to the high incidence of injuries in pulpwood logging is the fact that in the Great Lakes area the average injury-frequency rate for these operations was nearly 6 points higher than the average of 77.2 for general logging operations. In the Southern area this relationship was reversed, the rates being 76.8 for pulpwood logging and 81.8 for general logging. Similar comparison between the over-all injury records for the two types of logging in the Northeastern area was impossible because of a lack of sufficient reports from general logging operators in that region.

The full significance of these injury-frequency rates as indicators of the high degree of hazard in pulpwood logging is somewhat obscured unless they are compared with similar rates for other types of industrial activity. For example, in the same period (1944) the average injury-frequency rate for all manufacturing activities was only 18.4. In other words, in an equivalent amount of working time, the workers in pulpwood logging experienced 4 times as many injuries as an average group of workers selected from manufacturing as a whole. More specifically, for every million hours worked, pulpwood loggers had 1.6 times as many disabling injuries as workers in the brewing industry; 1.8 times as many as foundry workers; 2.1 times as many as workers in slaughtering and meat packing; 5.2 times as many as workers in the automobile-manufacturing industry; and 14.2 times as many as workers in the explosives industry. Perhaps even more illuminating is the fact

¹ Prepared in the Bureau's Industrial Hazards Division by Frank S. McElroy and George R. McCormack.

² Based on summary injury reports from 403 employers; and on an analysis made by Bureau field workers, of the detailed accident records of 43 employers. This study, together with additional data, will appear in a forthcoming bulletin.

³ The injury-frequency rate is the average number of disabling injuries for each million employee-hours worked. A disabling injury is one which results in death or permanent impairment, or causes an inability to work extending beyond the day of injury.

that approximately 1 in every 7 pulpwood loggers experienced a disabling work injury in 1944. This compares with ratios of approximately 1 in 24 in manufacturing as a whole; 1 in 10 in the foundry and brewing industries; 1 in 12 in slaughtering and meat packing; 1 in 28 in automobile manufacturing; and 1 in 81 in the explosives industry.

The Severity of Injuries: Although comparison between pulpwood logging and general logging on the basis of injury frequencies showed only minor differences, the reports did indicate that the injuries which occurred in pulpwood operations were generally less serious than those which occurred in general logging. Approximately 3 percent of the disabling injuries to pulpwood loggers in 1944 resulted in death or permanent physical impairment as compared with nearly 6 percent in general logging. Similarly, the average recovery time for temporary disabilities experienced by pulpwood workers was 22 days, as against 24 days required by general loggers. The standard severity rate, which takes into account the economic time loss resulting from death and permanent impairment cases, was nearly twice as high in 1944 for general logging operations as for those of pulpwood logging—15.4 days lost for each 1,000 employee-hours worked in general logging as against 8.2 in pulpwood logging.

The contrast between the severity of injuries in pulpwood logging and general logging, however, permits only a partial evaluation of the pulpwood logging record. In manufacturing as a whole, 0.4 percent of all reported disabilities resulted in death and 4.5 percent in permanent impairments, compared with 0.7 percent and 2.1 percent, respectively, in pulpwood logging. In general, therefore, nearly twice as many injuries to pulpwood loggers resulted in death as was the case in manufacturing as a whole, but only half as many injuries developed into permanent impairments. In terms of the standard severity rate, the pulpwood logging rate (8.2 days lost per 1,000 employee-hours worked) was nearly 6 times as high as the average for all manufacturing (1.4 days).

Accident Causes

Modern accident prevention is based upon two premises—first, that there is an identifiable cause

for every accident; and second, that when the cause is determined, it is generally possible to eliminate or to counteract that particular cause as the probable source of future accidents. As a general rule, every accident may be traced to the existence of an unsafe working condition, to the commission of an unsafe act, or to a combination of these accident-producing factors.

In most instances the correction of unsafe working conditions is entirely within the powers of management. The avoidance of unsafe acts, on the other hand, requires cooperation and understanding by both management and workers. Management must take the lead, however, by providing safety-minded supervision and by making sure that all workers are acquainted with the hazards of their operations and are familiar with the means of overcoming them.

UNSAFE WORKING CONDITIONS

In most industries it is feasible for management to take direct action to eliminate practically all unsafe working conditions. Commonly this is accomplished by improving physical conditions at the workplace, by the installation of guards, or by rearranging the work processes or procedures. In factory-type operations, in which the employer controls the materials and provides special premises, tools, and facilities for the work, and in which the work is performed under close supervision, this method of accident prevention is both practical and successful.

In logging operations, however, the situation is radically different. Here management can exercise only limited control over the work areas and materials. Many of the tools used in the woods are provided by the workers themselves, and much of the work is performed by small crews (in some cases by individuals working alone) in widely scattered and rapidly changing locations. Under these circumstances close supervision is impracticable. Furthermore, many of the most serious unsafe conditions encountered in the woods are due to weather, rough terrain, or other factors which management is powerless to control. As a result, the emphasis usually placed upon management's obligation to eliminate unsafe working conditions must be modified in respect to this industry. This does not mean, however, that all unsafe conditions should be accepted as unavoidable in logging operations. On the

contrary, many unsafe conditions which were found in pulpwood logging are entirely within the control of management. Furthermore, many such conditions which management cannot control directly could be minimized if greater attention were given to training the workers in safe practices and procedures.

Unsafe Conditions Management Can Control: Among the more common accidents arising from unsafe conditions over which management can exercise direct control are those which involve defective roadways, defective tools and equipment supplied by management, improperly loaded vehicles, and the lack of proper lifting equipment.

The inadequacy of many forest roadways over which the pulpwood must be transported was strikingly indicated by the number and variety of the accidents ascribed to road defects. In many instances loaded vehicles overturned or spilled their loads because they struck obstructions in the roadway. Drivers riding on seatless vehicles were thrown to the ground by bumps in the roads and were frequently struck by overhanging branches. Many vehicles skidded on slippery roads and crashed into trees or rocks, or overturned.

Most of the accidents resulting from the use of defective tools or equipment can be ascribed to the lack of an adequate inspection, repair, and replacement program. Commonly reported defects included tools with dull points or cutting edges, cracked or splintered handles, unguarded power tools, worn or stretched chains, and defective vehicles. In this last group, the more commonly reported defects were the lack of seats for drivers on horse-drawn vehicles, the absence of steps and handholds for use in getting on or off drays and trucks, and defects in motor trucks, such as defective brakes or steering mechanisms. All of these unsafe conditions are entirely within management's control and could be eliminated.

Similarly, the loading of vehicles is an operation for which management can provide supervision without difficulty. The responsibility for accidents resulting from tipping or spilling the load because of improper loading of a vehicle must accordingly be placed upon management. Proper control of loading procedures through safety-minded supervision also could have prevented many accidents which resulted from lifting heavy

materials without adequate assistance or from the hazardous use of mechanical loading equipment. In the latter category the reports indicated that it was not uncommon for clamshell buckets and sling loads to be swung over the heads of the workers—a procedure which is recognized as unsafe in the operation of hoisting equipment.

Although the provision of adequate first-aid facilities is not an accident-prevention measure, the absence of such facilities definitely constitutes an unsafe condition when an accident occurs, particularly when medical attention is not readily available. In this respect pulpwood-logging operations were generally found to be very poorly equipped. On some of the smaller operations there was no first-aid equipment at all. Even on the large operations it was not uncommon to find serious shortages in the first-aid supplies because of failure to provide prompt replacements.

Equally serious was the general lack of personnel trained in the emergency treatment of injuries or in the handling of injured persons. The severity of many woods injuries could obviously be minimized through the provision of better first-aid facilities and by providing every operation with at least one person who has been given first-aid training. A further step in this direction would be for management to arrange the work assignments so as to avoid, insofar as possible, the necessity of individuals working so far apart as to be out of contact with each other.

Unsafe Conditions Workers Can Control: In the group of unsafe conditions recognized as being less susceptible to direct management control, hazards found to be most productive of injuries were those associated with rough or slippery surfaces, dead trees or limbs, and the lack of clear work spaces. There appears to be little that either management or the workers can do to eliminate the possibility of accidents from some of these causes. It is equally apparent, however, that the workers themselves can and should eliminate many such unsafe conditions for themselves as a normal part of their work. Nevertheless, it is obvious from the record that such precautions are frequently not taken. The problem of management, therefore, is to increase the safety consciousness of the workers and to make sure that they know how to protect themselves.

Ice, snow, mud, wet grass, loose stones, under-

brush, stumps, etc., were responsible for many slipping and tripping accidents in all divisions of the industry. For the person who is moving about in the forest, constant alertness and close attention to where he is walking constitute the only practicable defense against such hazards. However, when the workers are performing felling, limbing, peeling, splitting, piling, or other operations in which a firm footing is essential, it should be their first concern to make sure that there are no such hazards underfoot. Similarly, although it is impracticable to attempt to remove low-hanging branches, vines, and the like in the vicinity of all operations, it is essential that this be done wherever it is necessary to swing an axe which might be caught and deflected.

Various types of accidents involving dead limbs or trees were reported. In some instances these were blown down by the wind onto persons who were working or merely walking nearby. In other instances, workers were hit by dead trees which were accidentally knocked over by the felled trees. Other reports indicated that dead limbs from the trees which fellers were cutting became dislodged by the jarring from axe blows, and injured the workers. Dead limbs also were the cause of a number of accidents in limbing operations. In these cases the limber's axe unexpectedly passed clear through the dead limb and either struck the worker or threw him off his feet.

UNSAFE ACTS

In the field of accident prevention an unsafe act is defined as "a violation of a commonly accepted safe procedure."⁴ Literally this means that no personal action shall be designated as unsafe unless there is a less hazardous alternative method or procedure. In many instances it was apparent from the reports that the individual knew the safe procedure but consciously decided not to follow it; for example, a worker deliberately removed the guard from a saw and used it without the provided protection. In other cases, the available data indicate that the person who acted unsafely did so simply because he did not know the safe method.

The first step toward the elimination of unsafe acts, therefore, requires that all workers are

thoroughly instructed in the safe methods of performing their duties and that they are familiar with the hazards connected with deviations from such safe procedures. Generally, the second essential step is to exercise strict supervision to see that only safe methods are used. In pulpwood logging, however, direct supervision of all operations is impracticable. Proper instruction, therefore, becomes doubly important. Unfortunately, it became quite evident in the course of the survey that relatively few pulpwood operators made any provision for the proper training of their employees. In most instances, only perfunctory inquiries were made about the previous training and experience of new employees before assigning them to work in the woods.

In most of the accident cases analyzed, the available facts indicated that the occurrence of the accident was directly related to the commission of an unsafe act in one of the following broad categories: Using unsafe equipment or using equipment unsafely; unsafe loading, placing, or planning; and taking an unsafe position or posture.

Unsafe equipment used or equipment used unsafely: The great majority of the unsafe acts in this group consisted of either the misuse of hand tools or the failure to grip objects securely in lifting. The tool most commonly misused was the axe, and the fault generally was a failure to control its swing. In many instances the axe was swung at an improper angle, so that it glanced off the tree or log and struck the axeman. In other cases axes were used in spaces that were insufficient for a free swing and, when meeting with obstructions, were deflected against the workmen. Attempting a cut while holding the axe with only one hand resulted in a number of injuries, and standing in the line of the cut resulted in many more. The latter type of accident was most common in limbing and splitting operations.

A number of other accidents involving limbers resulted from the practice of standing on the trunk of the tree while using an axe to trim off limbs. In this position it is frequently impossible to avoid a severe fall if the axe catches on an obstruction or if it unexpectedly passes through the limb being cut. Some of these accidents resulted in particularly severe injuries because the workers fell on the axe. Another group of

⁴ American Recommended Practice for Compiling Industrial Accident Causes, approved by the American Standards Association, August 1, 1941 (New York, 1941).

limbing accidents resulted from applying the axe to the wrong side of limbs which were under tension. When trees fall they often bend saplings or limbs to the ground and place them under tension. Safe practice dictates that these limbs or saplings should be cut with the axe from the under side of the curve. When they are struck on the top side the tension frequently will throw the axe back out of control.

Although cases involving the misuse of axes were the most numerous, and generally resulted in the most severe injuries, many accidents were attributable to the misuse of other hand tools such as saws, pulphooks and canthooks. Pulp-hook accidents were particularly common. Frequently the pulphook glanced from the log, or even missed the log entirely, and struck either the worker using the hook or a nearby co-worker. Generally the failure to properly control the tool in cases of this kind resulted from inattention or from improper grasp of the tool.

In addition to the accidents resulting from misuse of tools in processes for which they were designed, many accidents were chargeable to the use of hand tools for purposes other than those for which they were intended. An outstanding example of such misuse occurred when a feller used his axe to push over a tree which had been partly cut through. The axe slipped from the trunk and the worker fell on the blade.

In lifting, piling, or moving heavy, rough, and awkward objects like pulpwood logs, accidents are inevitable unless the handling procedures are properly coordinated and executed. The most common fault in these operations was that of taking an insecure grip on the object being handled or in releasing the object before it was solidly placed in position. As a result many feet or toes were crushed by objects which slipped from the hands of workers, or their fingers were pinched by the materials which they were piling or placing.

Unsafe Position or Posture: The most common unsafe act in this general category was inattention to footing. Natural irregularities in the surface of the ground were involved in some of the accidents in this group, but the majority were cases of tripping over logs, stumps, rocks, or other objects lying on the ground. Sometimes the workers tripped while stepping backwards to get out of the way of falling trees. In other instances,

workers were injured when their feet slipped from the hub caps, tires, wheel spokes, fenders, or frames of vehicles on which they were climbing, or when they stepped from vehicles onto loose stones or into holes in the ground. Teamsters were frequently injured when they attempted to stand on the load and were thrown off by unexpected jolts.

Lifting with a bent back or from an awkward position was a particularly common cause of injury, and numerous workers were injured because they unnecessarily placed themselves in the path of moving or falling objects. Accidents of the latter type frequently occurred in skidding and yarding operations when workers walked or stood close to or on the downhill side of logs which were being dragged. In some of these accidents the workers were caught between the moving logs and fixed objects such as trees, stumps, or boulders, resulting usually in serious injuries.

Unsafe loading, placing, or planning: Because woodsmen often work alone without supervision, they must assume a great deal of responsibility for their own safety and for the safety of others who may approach their operations. This is particularly true in felling operations. The felling of each tree presents a different combination of problems. The feller first must decide the direction in which he wishes the tree to fall. The line of its fall should be as clear as possible so that it will not strike other trees; and when it comes to rest it should be so located as to facilitate limbing and handling of the stripped trunk. Before the actual felling is started, safe practice dictates that the area at the base of the tree be checked to be sure that there is sufficient clear space for the work and for the feller to move away when the tree starts to fall. It is also essential for safety that the feller check the ground around the tree to make certain that he will have secure footing; and finally, that he inspect the tree for any dead limbs which might be dislodged by the blows of his axe and fall on him.

The experienced feller makes these observations automatically and quickly formulates a plan for the operation. This may include the removal of some of the hazards revealed by his inspection or the adoption of special procedures which will offset the hazards. However, the tendency on the part

of some experienced fellers to take chances to save time, or the inability of inexperienced workers to recognize existing hazards or to plan successfully for their elimination, frequently result in serious accidents in this operation.

A case, typical of many reported in this category, involved a felled tree which had lodged in a second tree. The feller then decided to cut down the latter in order to release the first tree. In the course of this operation the first tree became dislodged and dropped onto the feller, who was working under it. In another instance the feller climbed up the trunk of the lodged tree to reach a point where he could cut it loose. His weight caused it to come free, throwing him to the ground. In other instances workers were injured when they tried to push trees loose after they had lodged in other trees. Equally common were cases in which the butt of a falling tree kicked back and injured the feller when the top of the tree struck another tree.

The accidents classified as arising from unsafe loading or placing of materials commonly occurred in the course of loading or piling pulpwood. Generally these were cases of failure to interlock or block the piles to prevent the logs from rolling down or becoming dislodged when the pile was walked upon. There were, however, a considerable number of accidents caused by the unsafe placing of tools and other equipment. In a typical case, a worker was injured when after cutting a bush, he laid his axe on the ground and then stepped on it as he pulled the bush aside. Another worker laid his axe on a pile of branches and, when he picked up the branches, the axe fell on his foot.

Accidents of these types constitute strong evidence of the general lack of safety consciousness among pulpwood workers, and emphasize the need for a program based upon the "Three E's of Safety"—Engineering, Education, and Enforcement.

Wages of Foundry Workers, October 1946¹

PLANT WORKERS in both ferrous and nonferrous foundries in the large cities of the country received an average of \$1.20 in straight-time hourly earn-

ings in October 1946.² These earnings represented wage gains of about one-sixth and one-seventh in ferrous and nonferrous foundries, respectively, from January 1945. Roughly one-fourth of the workers in both branches of the industry earned less than \$1.00 in October 1946; the corresponding proportion in January 1945 was about half.

Largely because of reduced demands in peacetime for production of magnesium castings,³ nonferrous employment decreased by about three-eighths from January 1945 to October 1946. In ferrous foundries, 1946 employment was about one-eighth below the 1945 level. This decrease reflects, principally, curtailed operations in steel foundries; in contrast, employment in malleable-iron foundries was approximately the same in the two periods, and gray-iron foundries showed a marked increase in both employment and production.⁴

In both branches of the industry, earnings in the Pacific and Great Lakes regions were, respectively, about 8 and 5 percent above the national average in October 1946, while earnings in the Southeast were about 25 percent below. In general, the relative positions of the major foundry cities with respect to wages did not change between the two periods. Earnings remained highest in Detroit. Portland and San Francisco were also among the 5 highest ranking cities. In ferrous foundries high wage levels also prevailed in South Bend and Toledo, while in the nonferrous foundries Los Angeles and Cleveland were among the highest paying areas.

Considering individual jobs, neither branch of

¹ Prepared in the Bureau's Wage Analysis Branch by Donald L. Helm. Field work for the study was directed by the Bureau's regional wage analysts. Further detail will be provided in a mimeographed report: *Wage Structure—Foundries, 1946*.

The present survey was limited to independent foundries primarily engaged in producing ferrous or nonferrous castings, in wage areas in which the largest city contained at least 100,000 inhabitants. The survey covered seven-tenths of the workers and about three-fifths of the establishments with 8 or more workers, in the cities included in October 1946. It is estimated that at that time there were 690 ferrous foundries, employing approximately 100,000 workers, in these cities, and 456 nonferrous foundries, employing 25,000.

² Inclusion of smaller communities would presumably have had little effect on the national and regional averages presented here. About three-fourths of all foundries with 8 or more workers are located in cities of 100,000 or more. Moreover, in the January 1945 study, it was found that wage levels in nonferrous foundries in these urban areas were roughly only 5 percent above those found in smaller communities; while in ferrous foundries the difference in wage levels between large and small communities was even less marked.

³ Shipments of magnesium castings in October 1946 were roughly 90 percent below shipments in January 1945.

⁴ Employment of women in both ferrous and nonferrous foundries decreased sharply (at least 70 percent) between the two periods. In January 1945 women constituted about 5 and 8 percent respectively of total plant workers in the two branches of the industry, whereas in October 1946 they accounted for only 2 percent of the plant labor force.

the industry revealed a consistent pattern of changes in earnings. There was, however, a tendency for the earnings of unskilled workers in ferrous foundries to show greater proportionate increases than those of the more skilled workers.

Machine molding has increased in the postwar period, particularly in the smaller foundries. Nearly 1 in every 12 plant workers in ferrous foundries was employed as a machine molder in October 1946, compared with only about 1 in 20 in January 1945. The proportion of machine molders in nonferrous foundries in October 1946 was about the same as in ferrous foundries, but the increase in the relative importance of this category of workers from 1945 to 1946 was not as marked in nonferrous as in ferrous foundries. Decreases in the proportion of floor molders and increases in hand bench molders and shake-out

men were noted in both branches of the industry.

Among the skilled foundry occupations studied, average straight-time earnings in October 1946 ranged from \$1.43 for hand bench molders to \$1.55 for machine molders in ferrous foundries; in nonferrous foundries, the range for similar groups was somewhat broader—from \$1.30 for machine coremakers to \$1.52 for machine molders.

At the lower end of the wage scale, the minimum entrance rates paid foundry labor averaged 85 cents in both branches of the industry, although a fourth of the nonferrous foundries paid minimum rates of at least \$1.00 an hour and in ferrous foundries a similar proportion reported minimum rates of 95 cents or more. Regionally, entrance rates were highest on the Pacific Coast, where at least half of all foundries studied paid minimum rates of more than \$1.05 an hour.

TABLE 1.—Percentage distribution of plant workers in foundries by straight-time average hourly earnings¹ and region, October 1946

Average hourly earnings ¹ (in cents)	Ferrous foundries										Nonferrous foundries									
	United States	New England	Middle Atlantic	Border States	South-east	Great Lakes	Middle West	South-west	Mountain	Pacific	United States	New England	Middle Atlantic	Border States	South-east	Great Lakes	Middle West	South-west	Mountain	Pacific
Under 55.0	0.1	(2)	0.1	0.9	1.1	(2)	0.1	0.3			0.1		0.3	0.4		0.1				
55.0-59.9	.1		.1	.1	.5	(2)	.1	1.0	0.1		.1	0.2	.2			(2)	0.3			
60.0-64.9	.3	0.1	.1	.1	5.1	(2)	.1	1.9	.1		.2	.2	.3		0.6	.1	.5	2.6		
65.0-69.9	.5	.7	.2	.6	9.3	(2)	.2	4.0	.3	(2)	.8	1.2	.2		21.5	.5	.7	.9		
70.0-74.9	1.0	1.5	.4	2.6	14.2	0.2	1.2	8.6	.7	(2)	1.0	.9	.7	9.7	15.6	.7	1.7	1.7		0.1
75.0-79.9	2.0	3.4	1.6	6.7	18.7	.6	3.1	13.5	.3	0.1	1.9	2.2	1.4	11.4	18.1	.9	2.9	7.7		3.0
80.0-84.9	3.0	8.9	3.2	13.8	7.6	1.3	4.9	13.0	5.0		2.2	5.7	1.5	10.1	9.2	1.2	2.5	15.8	1.1	1.1
85.0-89.9	6.0	11.8	4.3	15.2	4.8	5.4	20.2	10.4	9.0	.1	4.8	5.7	9.7	20.7	3.1	2.9	3.5	20.9	16.0	.3
90.0-94.9	6.6	11.8	5.9	9.9	5.5	6.2	11.7	7.0	20.3	2.5	6.6	9.2	9.4	7.6	3.7	4.1	14.8	15.8	44.1	3.0
95.0-99.9	8.5	6.5	10.3	7.5	2.9	9.0	11.5	4.6	7.2	2.5	6.5	5.5	10.1	4.2	1.8	5.6	14.6	3.8	4.0	1.8
100.0-104.9	9.5	9.4	10.1	6.1	3.6	10.0	8.8	4.3	11.4	7.6	9.6	10.1	9.0	3.4	1.8	10.3	13.7	2.1	2.3	8.8
105.0-109.9	8.1	4.3	9.3	3.9	2.5	6.8	5.7	1.8	8.9	19.7	9.1	5.1	8.1	2.5	1.8	10.8	10.6	1.3	5.1	9.6
110.0-114.9	5.7	6.7	6.6	4.6	5.7	5.4	3.8	4.0	2.0	5.8	7.3	7.1	8.0	3.0	1.5	7.3	4.4	2.6	.6	8.8
115.0-119.9	6.6	4.3	7.2	5.3	2.8	7.0	5.1	2.3	4.4	7.7	6.0	5.7	5.5	4.6	.6	6.7	1.1	3.8	3.4	7.4
120.0-124.9	5.4	4.0	5.9	2.8	2.3	5.9	2.3	1.4	13.8	5.9	5.1	5.1	5.5		1.5	5.4	3.7	.4	6.3	4.3
125.0-129.9	5.4	3.1	5.0	3.0	5.5	6.2	2.7	6.7	.8	6.6	6.4	7.1	5.1	12.7	6.7	6.5	5.1	12.4	5.1	7.2
130.0-134.9	4.5	2.8	4.5	4.6	2.3	4.9	3.8	3.4	7.3	4.4	4.1	2.5	5.6	7.2	9.2	3.9	2.6	1.3	9.7	2.9
135.0-139.9	4.7	8.4	5.1	4.3	1.2	4.1	3.2	4.4	3.7	6.7	4.8	11.0	5.0		1.5	3.8	4.3	2.6	.6	4.4
140.0-144.9	3.9	1.8	3.9	1.5	1.1	4.5	5.0	2.8	1.6	3.4	4.2	4.9	4.0	1.3	.3	3.4	6.6	2.1		7.4
145.0-149.9	3.2	1.5	2.2	1.0	.7	4.7	.8	1.9	.7	2.8	4.3	2.6	3.2	.4		6.0	2.0	1.3	1.7	3.1
150.0-159.9	4.9	2.1	2.9	1.2	1.2	5.0	2.6	1.1	1.8	18.0	6.2	3.0	3.3		.6	7.3	1.9	9		14.4
160.0-169.9	3.0	1.7	3.1	1.0	.3	3.8	1.3	.3	.1	2.5	2.3	.9	1.6	.8	.6	2.8	.8			3.9
170.0-179.9	2.0	1.4	2.7	.7	.5	2.5	.8	.5		.7	1.7	.9	.8		.3	2.6	.4			2.0
180.0-189.9	1.6	1.0	1.9	.8	.4	2.1	.3	.3	.1	.5	1.2	.8	.6			2.0	.3			.6
190.0-199.9	1.0	.5	1.0	1.1		1.3	.1	.1		.4	1.0	.7	.2			1.7				.1
200.0-209.9	.9	.6	1.3	.4	.1	1.0	.3	.2	.1	.4	1.2	.3	.2			1.9	.3			2.2
210.0-219.9	.5	.6	.5	.1	(2)	.7	.1	.2	.3	.3	.5	.3	.2			.6	.1			1.3
220.0-229.9	.3	.2	.3	.1	.1	.4	(2)	(2)		.3	.3	.1	.2			.3	.1			.9
230.0-239.9	.2	.3	.2		(2)	.3	.1			.3	.1	.1	.1			.2	.3			.1
240.0-249.9	.1	.1	.1			.2				.2	.1		(2)			.2	.1			
250.0 and over	.4	.5	.3	.1	(2)	.5	.1	(2)		.6	.3	.9	(2)			.2	.1			1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average hourly earnings ¹	\$1.20	\$1.10	\$1.20	\$1.03	\$0.90	\$1.25	\$1.06	\$0.97	\$1.06	\$1.29	\$1.20	\$1.15	\$1.13	\$0.97	\$0.88	\$1.26	\$1.09	\$0.96	\$1.00	\$1.30
Number of workers	95,761	5,073	26,626	1,618	2,794	43,760	5,019	2,116	765	7,990	23,653	2,634	4,897	237	327	11,383	1,128	234	175	2,638

¹ Excludes premium pay for overtime and night work.

² Less than 0.05 of 1 percent.

Variations in Earnings

High earnings were associated with large plants, unionization, and incentive systems. (Earnings of incentive workers were 17 to 42 percent higher than those of time workers among individual jobs studied in ferrous foundries and from 7 to 30 percent higher in nonferrous foundries.) All three factors are interrelated, since large foundries are more frequently unionized and employ greater numbers of incentive workers than do small establishments.

An effort has been made to isolate in part the effects of these factors on interplant differences in wage levels for a limited number of skilled jobs.⁴ This analysis indicates that incentive methods of payment apparently had more effect on interplant differences in wage levels than any of the other factors. Earnings of incentive workers were higher

⁴ Based on tabulations showing average union and incentive earnings separately by size of foundry, and average earnings in all union and nonunion foundries by method of wage payment.

than those of time workers in foundries of all sizes and in union as well as nonunion plants. The difference in earnings between incentive and time workers was, in general, greater in nonunion than in union foundries.

Thus, among coremakers and molders, the greater proportion of incentive workers in the largest foundries appeared to account for the higher earnings in these foundries. Earnings of time workers in these occupations in the largest foundries were generally lower than in those of medium size, and in some instances were lower than in the smallest foundries. Again, large nonunion foundries, apparently because of their more frequent use of incentive payments for these skilled jobs, often showed higher average earnings than large union foundries.

For the less skilled workers (chippers and grinders, shake-out men and sand mixers) size of establishment appeared to exercise more influence than for skilled workers.

TABLE 2.—Average hourly wage rates (straight-time hourly earnings)¹ for men in selected occupations in foundries, by region, October 1946

Occupation and grade	Ferrous foundries										Nonferrous foundries							
	United States		Average hourly rates								United States ²		Average hourly rates					
	Number of workers ¹	Average hourly rates	New England	Middle Atlantic	Border States	South-east	Great Lakes	Middle West	South-west	Mountain	Pacific	Number of workers ¹	Average hourly rates	New England	Middle Atlantic	Great Lakes	Middle West	Pacific
Carpenters, maintenance.....	315	\$1.21	\$1.09	\$1.20	\$1.09	\$1.12	\$1.26	\$1.14	(⁴)	(⁴)	\$1.37	68	\$1.25	\$1.30	\$1.24	\$1.22	-----	\$1.31
Chippers and grinders.....	9,447	1.19	.93	1.18	1.12	.76	1.28	1.03	\$0.83	\$0.95	1.18	2,421	1.07	.99	1.04	1.12	\$0.96	1.16
Coremakers, hand.....	5,032	1.44	1.28	1.44	1.19	.99	1.50	1.38	1.24	1.27	1.52	1,552	1.42	1.28	1.38	1.47	1.33	1.45
Coremakers, turn-over-draw-machine.....	463	1.52	1.30	1.55	-----	1.00	1.63	1.30	(⁴)	-----	1.24	123	1.30	1.14	1.23	1.44	-----	1.26
Electricians, maintenance.....	506	1.31	1.17	1.28	1.09	1.25	1.34	1.21	1.29	(⁴)	1.38	86	1.38	1.37	1.37	1.35	1.39	(⁴)
Guards.....	389	.98	(⁴)	1.01	(⁴)	.83	1.00	.88	(⁴)	-----	(⁴)	76	.95	.92	.99	.96	(⁴)	-----
Inspectors, class A.....	132	1.29	(⁴)	1.37	-----	(⁴)	1.34	1.13	(⁴)	-----	(⁴)	-----	-----	-----	-----	-----	-----	-----
Inspectors, class B.....	417	1.17	(⁴)	1.19	(⁴)	.96	1.20	1.01	-----	(⁴)	(⁴)	195	1.22	1.29	1.16	1.23	(⁴)	-----
Inspectors, class C.....	884	1.12	.86	1.04	(⁴)	.85	1.16	1.19	(⁴)	-----	1.20	231	1.03	.98	1.01	1.04	-----	(⁴)
Maintenance men, general utility.....	837	1.19	1.08	1.18	1.12	.93	1.21	1.07	1.16	(⁴)	1.44	181	1.25	1.22	1.19	1.20	1.15	1.49
Mechanics, maintenance.....	483	1.25	1.09	1.22	(⁴)	1.20	1.34	1.19	1.08	1.21	1.42	63	1.32	1.25	1.24	1.33	1.43	(⁴)
Millwrights.....	449	1.29	(⁴)	1.36	1.14	1.16	1.28	(⁴)	(⁴)	-----	1.73	99	1.33	1.27	1.22	1.34	-----	-----
Molders, hand, bench.....	2,593	1.43	1.34	1.44	1.23	1.20	1.47	1.36	1.13	(⁴)	1.49	1,564	1.40	1.29	1.38	1.47	1.32	1.50
Molders, floor.....	5,727	1.45	1.43	1.44	1.33	1.19	1.47	1.45	1.24	1.29	1.56	663	1.49	1.42	1.43	1.59	1.38	1.53
Molders, machine.....	7,694	1.55	1.46	1.60	1.22	1.18	1.58	1.40	1.16	1.26	1.63	1,977	1.52	1.43	1.34	1.56	1.35	1.72
Patternmakers, wood.....	793	1.55	1.32	1.52	1.40	1.28	1.62	1.46	1.47	1.32	1.83	329	1.81	1.72	1.51	1.87	1.46	1.87
Pourers, metal.....	1,804	1.16	1.06	1.15	1.01	.85	1.23	1.03	.88	1.03	1.12	697	1.09	1.10	1.07	1.12	1.01	1.17
Sand mixers, hand and machine.....	1,647	1.04	1.02	1.02	.90	.71	1.11	.91	.76	1.03	1.12	383	.99	.95	.98	1.03	.96	1.08
Shakeout-men.....	4,038	1.10	1.05	1.08	.90	.75	1.18	.96	.84	.94	1.10	1,547	1.00	.98	.94	1.05	.94	1.08
Stock clerks.....	202	1.04	(⁴)	1.03	(⁴)	(⁴)	1.05	(⁴)	(⁴)	(⁴)	1.18	76	1.03	(⁴)	(⁴)	1.00	1.03	(⁴)
Truckers, hand.....	978	.98	.86	.97	(⁴)	.73	1.02	.96	(⁴)	-----	-----	109	.91	(⁴)	.92	.95	(⁴)	-----
Truckers, power.....	460	1.07	.99	1.02	(⁴)	(⁴)	1.12	1.00	(⁴)	(⁴)	(⁴)	78	1.11	(⁴)	(⁴)	1.11	(⁴)	-----
Watchmen.....	753	.86	.88	.85	.74	.68	.90	.71	.66	.78	.95	200	.79	.77	.77	.79	(⁴)	.92
Working foremen, processing departments.....	1,263	1.38	1.35	1.38	-----	1.27	1.36	1.27	1.29	1.25	1.57	421	1.50	1.51	1.41	1.48	(⁴)	1.74

¹ Excludes premium pay for overtime and night work.

² Represents the estimated total employment in all wage areas with a central city of at least 100,000 population. Similar information for each of the regions is available in the mimeographed report "Wage Structure, Foundries, 1946."

³ Includes data for other regions in addition to those shown separately.

⁴ Insufficient number of workers to justify presentation of an average.

Wage levels as measured by over-all straight-time average hourly earnings were highest (\$1.26) in foundries producing aluminum and magnesium castings, and lowest (\$1.16) in those manufacturing other nonferrous metal castings. Slightly more than 1 percent of the workers in the former type of foundries and 6 percent in the latter, earned less than 80 cents an hour, while the proportions earning \$1.50 or more were about 19 and 12 percent respectively. Though there were a few exceptions, there was a clear tendency toward higher earnings for comparable jobs in magnesium and aluminum foundries in each size group.

There was little variation in over-all earnings among ferrous foundries making different types of castings, and such differences as existed were related to variations in size of establishment. The great majority of small ferrous foundries produced gray-iron castings. An examination of rates for a few key jobs by size of foundry revealed no consistent pattern of wage differentials by type of casting.

Wage and Related Practices⁶

Despite the increase in hourly rates in the industry, the average weekly pay of the foundry worker in January 1945 and in October 1946 was roughly the same.⁷ This, of course, reflects primarily the decrease in average hours worked a week since VJ-day, and the consequent loss in overtime premium pay. In October 1946, at least 3 in every 5 foundries studied reported a scheduled full-time workweek of 40 hours. Among ferrous foundries only about 1 in 5, and among nonferrous foundries about 1 in 8 reported a workweek of 48 hours or longer. This is in marked contrast to January 1945, when about 85 percent of the foundries reported a workweek of at least 48 hours. In contrast to the situation in January 1945, the curtailed activities of nonferrous foundries reduced the average workweek below that in the ferrous branch of the industry.

Although there was a decrease in the extent of night work from 1945 to 1946, there was a substantial increase in the proportion of plants that paid shift differentials, particularly among ferrous

foundries. Both branches of the industry, however, had curtailed third-shift operations and reduced the total number of workers on extra shifts. In October 1946, 17 percent of ferrous and 12 percent of nonferrous foundry workers were employed on extra shifts; the respective proportions so engaged in January 1945 were 28 and 22 percent. No significant change was noted in the proportion of plant workers paid on an incentive basis; the figures were about 30 and 20 percent, respectively, in ferrous and nonferrous foundries.

There was an increase in the proportion of foundries granting paid vacations to plant workers. Roughly 4 in every 5 foundries had such plans and in nearly all cases 1 week with pay was provided after a year's service.

Nonproduction bonuses were not reported as frequently as in the previous survey. In 1946 they were reported by only 1 in 5 ferrous foundries and 1 in 3 nonferrous foundries, and were generally in the form of Christmas bonuses. Averaged over all plant workers, these extra payments would have increased hourly earnings by less than half a cent, in both branches. There were no marked changes in company-sponsored insurance and pension plans; about two-fifths of the ferrous foundries and one-third of the nonferrous foundries had such plans. Life insurance was most common, although there was also a substantial number of health-insurance plans.

Shift Differentials in Manufacturing, 1945-46¹

THE MAJORITY of manufacturing establishments in the United States operating evening or night shifts² paid shift differentials in 1945-46; most frequently these premium payments amounted to 5 cents an hour added to the first-shift hourly rate. However, despite high war and postwar production levels during this period, only about a fourth of the workers in the industries studied were employed on late shifts. Most of these employees were on evening shifts; only about 1

⁶ It should be noted that in the discussion of changes in wage practices, data for the current survey were limited to communities with 100,000 or more, while information for January 1945 included smaller communities. It is believed, however, that the changes discussed reflect current trends in the industry.

⁷ See Monthly Labor Review, April 1945 (p. 904), and January 1947 (p. 148).

¹ Prepared in the Bureau's Wage Analysis Branch by Karl Hafen.
² I. e., second or third and/or other shifts.

worker in 16 was employed on a night-shift schedule.

Shift differentials increased in importance during the war; and the extension of the practice of premium pay for late-shift work was an issue of some significance during the period of wartime wage stabilization.

The information presented here represents a summary of shift-employment and shift-differential practices in 56 industries studied by the Bureau of Labor Statistics during 1945-46.³ Together, these industries employed almost half of all manufacturing workers and were representative of all broad manufacturing industry groups except rubber, petroleum refining, lumber, printing, shipbuilding, and basic iron and steel.⁴

With a few exceptions, notably in the textile industries, premium pay was about as common for second- as for third-shift work (table 1). The size of the premium, however, tended to be somewhat greater for third than for second shifts. Five cents was the most common second-shift differential, whereas 6 to 10 cents was slightly more frequent for third-shift workers (table 2).

About 2 out of 3 establishments paying differentials made payment in the form of a uniform cents-per-hour addition to first-shift rates. Next most common was a uniform percentage differential, found in 1 out of 5 establishments; these differentials were generally larger, when translated into cents, than the uniform cents-per-hour premiums. A full day's pay for reduced hours of work and paid lunch periods, not provided for first-shift workers, were each provided by 2 or 3 percent of the plants paying shift differentials. The remaining tenth paid a combination of the types of differentials described. Uniform cents-per-hour additions were especially common in the textile and chemical industries.

Although late-shift work was virtually nonexistent

in the apparel industries, 40 percent of the textile employees worked on second or third shifts (table 3). Individual industries in which extra-shift operations were most common included industrial chemicals, copper alloying, rolling, and drawing, and paper, pulp, and paperboard manufacture, all characterized by continuous processes. Late-shift work was also widespread in cotton, rayon, and woolen textiles, and full-fashioned hosiery manufacture.

TABLE 1.—Proportion of manufacturing establishments with late-shift operations paying shift differentials, by shift and industry, 1945-46

Industry	Pay-roll period studied	Percent paying shift differentials for—	
		Second shift	Third and/or other shifts
All manufacturing industries studied.....		57	63
Apparel ¹		53	72
Knit outerwear.....	July 1946.....	45	70
Knit underwear.....	do.....	75	74
Chemicals ²		71	71
Industrial chemicals.....	January 1946.....	63	66
Soap and glycerin.....	July 1946.....	94	96
Metalworking ³		75	78
Aircraft engines and engine parts.....	January 1945.....	91	88
Automobiles.....	do.....	79	86
Communication equipment.....	do.....	81	88
Copper alloying, rolling, and drawing.....	Spring-summer 1946.....	97	100
Electric generating and distribution equipment.....	January 1945.....	89	96
Electroplating, plating and polishing.....	do.....	62	68
Fabricated structural steel.....	do.....	71	86
Foundries, ferrous.....	do.....	57	56
Foundries, nonferrous.....	do.....	66	79
Iron and steel forgings.....	do.....	72	73
Machine tool accessories.....	do.....	88	85
Machine tools.....	do.....	88	82
Machinery.....	do.....	78	79
Oil burners, hot-water and steam heating apparatus.....	July 1946.....	85	100
Power boilers and associated products.....	January 1945.....	76	60
Radios, radio equipment (except tubes), and phonographs.....	do.....	79	82
Small arms.....	do.....	83	86
Stoves and ranges.....	July 1946.....	83	84
Tanks.....	January 1945.....	90	100
Tool and die jobbing shops.....	do.....	73	55
Textiles.....		32	69
Cotton textiles.....	April 1946.....	10	65
Hosiery, full-fashioned.....	January 1946.....	43	42
Hosiery, seamless.....	do.....	22	41
Rayon and silk textiles.....	July 1946.....	28	90
Textile dyeing and finishing.....	do.....	43	68
Woolens and worsted textiles.....	April 1946.....	60	80
Other manufacturing industries ⁴		38	42
Bakeries.....	July 1945.....	28	37
Cigarettes.....	January 1946.....	83	
Corrugated and fiber boxes.....	October 1945.....	75	100
Fiber cans and tubes.....	do.....	50	100
Folding paper boxes.....	do.....	70	61
Paperboard.....	do.....	42	45
Pulp and paper.....	do.....	45	46
Structural clay products.....	do.....	27	30

¹ Also includes data for men's and boys' dress shirts and night wear, overalls, industrial garments, work pants, and work shirts; and women's and misses' dresses and suits and coats.

² Also includes data for drugs and medicines, paints and varnishes, and perfumes and cosmetics.

³ Also includes data for sheet metal establishments.

⁴ Also includes data for chewing and smoking tobacco, cigars, costume and precious jewelry, footwear, set-up boxes, and wood furniture.

³ The industries studied are listed in table 1. The individual surveys summarized here covered a representative group of plants rather than all firms in each industry; altogether 15,636 establishments were studied. As these surveys were made primarily to obtain wage-rate information, a larger proportion of large establishments and of establishments in large cities and in certain regions were included in order to permit presentation of separate data by region. Moreover, the proportion of establishments studied varied from industry to industry. No attempt was made in the summary of shift-differential practices, presented in terms of number of establishments, to compensate for differences in coverage between industries or between segments of the same industry, although the information on shift employment was adjusted to allow for these differences.

⁴ Although field studies were not made in the printing, rubber tire and tube, shipbuilding, or basic iron and steel industries, shift differentials are known to be widely paid in these industries.

TABLE 2.—Shift differential practices in selected manufacturing industry groups, 1945-46

Extent and type of shift differential	All manufacturing industries studied ¹		Chemicals		Metal working		Textiles	
	Second shift	Third and/or other shifts	Second shift	Third and/or other shifts	Second shift	Third and/or other shifts	Second shift	Third and/or other shifts
Establishments operating extra shifts.....	5,690	2,781	306	247	2,773	995	1,161	642
Establishments paying shift differentials.....	3,239	1,765	217	175	2,086	770	371	439
<i>Amount of shift differential</i>	Percent of establishments paying differentials							
Uniform cents addition to first-shift hourly rate.....	64	69	81	79	55	52	79	82
Under 5 cents.....	15	6	22	6	6	2	33	5
5 cents.....	37	28	40	22	39	27	41	37
Over 5 and under 10 cents.....	5	22	13	27	4	12	3	33
10 cents.....	5	10	5	22	5	10	1	6
Over 10 cents.....	2	3	1	2	1	1	1	1
Uniform percent addition to first-shift hourly rate.....	22	19	6	7	28	32	16	13
Under 5 percent.....	(²)	(²)			(²)		1	(²)
5 percent.....	7	4	4	2	8	6	11	3
Over 5 and under 10 percent.....	2	2	(²)	2	2	4	1	2
10 percent.....	12	11	2	3	17	19	3	7
Over 10 percent.....	1	2			1	3	(²)	1
Full day's pay for reduced hours.....	2	2			2	3	1	1
Paid lunch period not provided for first shift.....	3	2	3	3	4	2	1	
Other ³	9	8	10	11	11	11	3	4
Total.....	100	100	100	100	100	100	100	100

¹ Includes industry groups not shown separately (industries studied are listed in table 1). The total of all establishments studied (including those operating one shift), was 15,636, of which 999 were in chemicals, 6,647 in metal-working industries, and 1,448 in textiles.

² Less than one-half of 1 percent.

³ Includes establishments paying two or more types of differentials listed above.

TABLE 3.—Percentage distribution of establishments and plant employment in selected manufacturing industry groups, by shift, 1945-46.

Industry group and shift	Percent of—	
	Establishments operating specified shifts	Plant employment on specified shifts
All manufacturing industries studied: ¹		
First shift.....	100	76
Second shift.....	36	18
Third and/or other shift.....	18	6
Apparel:		
First shift.....	100	99
Second shift.....	6	1
Third and/or other shift.....	1	(²)
Chemicals:		
First shift.....	100	81
Second shift.....	31	11
Third and/or other shift.....	25	8
Metalworking:		
First shift.....	100	74
Second shift.....	42	20
Third and/or other shift.....	15	6
Textiles:		
First shift.....	100	60
Second shift.....	80	29
Third and/or other shift.....	44	11

¹ Includes data for other manufacturing industries in addition to industry groups shown separately. (For a list of industries studied, see table 1.)

² Less than $\frac{1}{2}$ of 1 percent.

There was less variation among industries and industry groups in the payment of shift differentials than in the extent of extra-shift operations. Premium pay for late shifts was more frequent in metalworking establishments, and less frequent for second-shift operations in the textile industries (particularly in cotton mills), than in other manufacturing. Only 1 out of 3 textile plants paid a differential for second-shift work, whereas 2 out

of 3 provided a premium for their third-shift employees. Although there were individual industries in other industry groups in which shift operations were more common, the textile industries as a whole had the highest percentage of establishments with second- and third-shift operations and the lowest percentage of plants paying shift differentials. Premium rates were paid by less than 1 in 3 bakeries and structural-clay-products establishments operating extra shifts. Almost every copper alloying, rolling, and drawing plant provided premium rates for late-shift work.

Considering individual industry groups as well as all manufacturing industries studied, shift differentials tended to be less common in the Southeast and Southwest and to be most frequent in the Pacific States.⁵ Differentials were somewhat smaller in the Southeast and Border States. Plants in these two regions most commonly added 4 cents or less to the first-shift rate, but in other regions 5 cents an hour was most often paid second-shift workers.

⁵ The regions used in this study include the following: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—New Jersey, New York, and Pennsylvania; *Border States*—Delaware, District of Columbia, Kentucky, Maryland, Virginia, and West Virginia; *Southeast*—Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; *Great Lakes*—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *Middle West*—Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota; *Southwest*—Arkansas, Louisiana, Oklahoma, and Texas; *Mountain*—Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming; *Pacific*—California, Nevada, Oregon, and Washington.

Man-Hours Expended Per Unit: Selected Machine Tools, 1939-45¹

DATA COMPILED by the Bureau of Labor Statistics from a sample of plants in the machine-tool industry reveal that the average number of man-hours (direct and indirect labor) required to build selected major types of machine tools was about 3.8 percent higher in 1945 than in 1939. During the period 1939 to 1941, man-hours expended per machine manufactured declined approximately 10 percent and, in the years 1941 to 1943, remained at approximately the same level. This reduction accompanied the phenomenal wartime expansion in the production of machine tools, which reached a peak late in 1942. The increased volume made possible many economies associated with quantity output of similar machines and greater specialization of function by labor and equipment. The ensuing rise of some 13 percent from 1943 to 1945 resulted from a combination of factors which tended to lower productive efficiency; these included substantial increases in overhead labor, losses of experienced personnel, addition of workers new to the labor force, and production difficulties due to wartime shortages of materials and facilities.

The number of direct man-hours alone required to produce a machine tool (i. e., man-hours of nonsupervisory wage earners engaged in productive machine operation and assembly work) declined on the average about 19 percent, between 1939 and 1943. After 1943, direct man-hours expended per unit rose, but in 1945 they were still 10 percent below the 1939 base.

The proportion of indirect labor (supervision, materials handling, maintenance, and other factory labor not engaged directly on productive operations) to total labor increased generally throughout the period 1940 to 1945. The indirect-labor component thus partly offset the decline of direct-labor requirements up to 1943, and accounted for part of the upturn in unit labor requirements after that year. This circumstance

reflects the unusual increases in supervision, inspection, production planning and scheduling, specialized machine maintenance, tool-grinding, and materials-handling work carried on in machine-tool plants during the period.

Indexes compiled for six important types of machine tools show that the 1939-45 movement of man-hours expended per unit for individual machines ranged from a decrease of 17 percent for radial drills to an increase of almost 9 percent for single-spindle upright drills; half of the product indexes reflected increases between 1939 and 1945, and half showed decreases.

Productivity Studies: The machine tool industry study is one of a series being prepared by the Bureau of Labor Statistics to provide more comprehensive and detailed information on industrial productivity than has previously been available. The statistics for these studies are based on reports furnished directly to the Bureau by representative firms in the covered industries. It is planned to maintain these studies on an annual basis.

According to the National Machine Tool Builders' Association, machine tools are "power-driven complete metalworking machines not portable by hand, having one or more tool and work holding devices, used for progressively removing the metal in the form of chips." This definition was adopted in the 1939 Biennial Census of Manufacturers, and was also followed by the Tools Division of the War Production Board. Virtually all of the material presented in this study refers to plants in which machine tools are the chief product.

After consultation with many persons familiar with the industry, including trade-association and plant officials, a sample of the important types of machine tools was chosen to represent the work carried on by the industry. Careful specifications for the selected products were drawn up, and about 100 machine-tool plants were visited by the Bureau's field agents. Data on average unit labor requirements for the selected tools were obtained from firms which found it feasible to participate in the study. The field agents also obtained supplementary information on factors affecting the labor requirements trends.

Unit man-hour requirements were requested on each of 14 general-purpose machine tools. The types selected are indicated in table 1 and its footnote. Certain general types of machine tools

¹ Prepared by Kenneth A. Middleton, under the direction of James M. Silberman, in the Productivity and Technological Development Division of the Bureau. This is a summary of a longer study which may be obtained from the Bureau.

were excluded at the outset; these were special gear-cutting and finishing machines, threading and tapping machines, filing machines, and cut-off machines such as power hacksaws. For each selected type, a detailed set of specifications was drawn up with the object of including the particular models in largest production. The specifications allowed ranges in size and other characteristics which would include reasonably comparable machines made by several manufacturers. The goal was to represent the most common sizes of the types of machine tools most important in the industry's output.

Indexes of Man-Hours

Tables 1 and 2 present in index-number form the trends in man-hours expended per machine, as determined from the reported data. Indexes were not separately derived for all the types of machines on which reports were requested. For each product and product group, two indexes are given. One index (see table 1) refers to the sum of direct- and indirect-labor man-hours per machine, and the other (table 2) represents direct-labor man-hours only. Direct man-hours refer to the work of wage earners engaged directly on

TABLE 1.—Indexes of unit man-hours (direct and indirect labor) expended for the manufacture of selected types of machine tools¹

[1939=100]

Type of machine tool	1940	1941	1942	1943	1944	1945
All reported products.....	91.5	89.5	91.3	90.5	100.8	103.8
Boring machines.....	94.5	99.8	97.0	93.1	93.9	99.5
Horizontal.....	84.1	87.3	80.0	80.5	96.5	94.6
Drilling machines.....	84.0	78.7	75.1	72.5	80.9	87.2
Single-spindle upright.....	97.1	95.0	95.1	96.0	98.2	108.7
Radial.....	81.3	75.5	71.1	67.8	77.4	82.9
Lathes.....	89.4	89.4	92.6	91.6	115.5	107.2
Engine.....	96.2	95.3	93.4	100.0	107.2	100.8
Turret.....	82.2	77.7	81.6	81.3	105.5	102.4
Shapers: Horizontal.....	91.4	90.3	92.8	97.2	93.6	99.3

¹ These indexes show the average relationship between man-hours expended and units of product for the selected types of machine tools covered. The trends are determined by the combined influence of a large number of factors, including changes in equipment, production methods, management policies, skill and efficiency of the work force, availability of materials, and others. See text for description of methods used in compiling the indexes and for discussion of factors affecting them.

Unit man-hours include total factory man-hours as generally classified by factory accountants, which are charged to the specified products. General administration, office, engineering, and sales employees are excluded. Direct- and indirect-labor man-hours, the sum of which constitutes unit man-hours, are defined in a manner which conforms with general accounting practices of the plants.

The combined indexes include data for the machines listed in tables 1 and 2, and in addition for the following products, which could not be shown separately because trends for individual companies might be revealed: vertical boring mills; horizontal broaching machines; horizontal surface grinders; tool and cutter grinders; automatic screw machines; horizontal plain millers. For two of the products originally specified—the multiple-spindle vertical drill and the double-housing planer—the data reported were considered inadequate for inclusion in the indexes.

production operations, primarily machine operators and assembly workers. Indirect man-hours represent the functions of timekeeping, shipping and receiving, materials handling, production scheduling, machine set-up, inspection, maintenance, engineering of tools, dies, and gages, and plant supervision.

TABLE 2.—Indexes of direct-labor man-hours expended for the manufacture of selected types of machine tools¹

[1939=100]

Type of machine tool	1940	1941	1942	1943	1944	1945
All reported products.....	94.1	88.5	85.0	80.6	87.8	90.4
Boring machines.....	92.4	93.9	87.2	79.0	79.6	83.1
Horizontal.....	84.6	89.1	82.2	81.4	85.3	95.6
Drilling machines.....	88.7	83.6	78.1	72.5	77.0	82.1
Single-spindle upright.....	103.3	100.3	98.8	95.7	92.5	96.8
Radial.....	85.7	80.2	74.0	67.8	73.9	79.1
Lathes.....	89.1	86.3	86.7	82.7	103.6	100.0
Engine.....	97.7	96.5	93.4	91.7	95.1	91.5
Turret.....	80.3	89.8	88.3	67.9	90.1	94.9
Shapers: Horizontal.....	95.3	86.4	86.3	93.0	89.3	93.3

¹ See footnote to table 1.

Wherever possible, functions such as general accounting, including pay-roll and cost accounting, purchasing, personnel relations, welfare services, and developmental engineering were specifically excluded from direct- and indirect-labor man-hours. However, in allocating indirect-labor man-hours to the product under consideration, several plants found it necessary to apply the plant-wide percentage, thus including some of the above-named functions. The man-hours reported by respondents are those expended in the manufacture of specific machine tools, either as tabulated from employee time tickets or as allocated to the products by standard industry cost-accounting methods.²

Coverage: The major types of machine tools represented in the combined index make up about three-fourths of the industry's 1939 production by value, and a substantially larger proportion of the wartime output. Of the usable reports

² The indexes shown in this study are based on man-hours as customarily carried in the accounting records of the participating plants. They are thus not based exclusively on either man-hours paid for or man-hours worked. Man-hours paid for may exceed man-hours worked because of paid vacations, "call-ins," portal-to-portal time, and paid lunch periods. The nature of industry records was such that it was not possible to take explicit account of such practices. Since this study is concerned with trends, however, only changes in these practices would affect the results. Where man-hours were accounted for primarily through the accumulation of time tickets, man-hours paid for but not worked would not enter.

sent to the Bureau by machine-tool manufacturers several did not cover the entire period 1939-45. Indexes for the latter part of the period represent 26 companies, producing 43 percent of the national output during the period August 1944 to July 1945, of all machine tools of the types included in the combined index. The indexes for the earlier years are based on reports for 19 of the same 26 companies, accounting for 40 percent of the national output. Some companies reported for more than one product. The total number of companies furnishing information used in the study was 33, including a majority of the larger manufacturers. These companies during the period August 1944 to July 1945 produced 50 percent of the national output of the types of machine tools represented in the indexes. Extent of coverage varies among the products. Relatively high coverage is attained in the indexes for such major products of the industry as horizontal boring machines, radial drills, and turret lathes.

Meanings: The indexes of "unit man-hours expended" presented in this report should be distinguished from the indexes of "productivity" or "output per man-hour" also published by the Bureau and by other agencies. Indexes of unit man-hours expended measure changes in the number of man-hours required to produce a single unit of product. Productivity or output per man-hour indexes measure the output obtained for a given unit of labor input. In interpreting the indexes, it should be borne in mind that when productivity rises, these indexes decline, and vice versa. The terms "man-hours expended" and "man-hours required" are used interchangeably.

The indexes represent averages of the trends reported by participating plants. Each index for a specific type of machine tool is an average of indexes for the plants reporting that type, each plant receiving a weight determined by the aggregate man-hours which it expended on the reported machines during the period covered. The combined indexes for all products and for selected groups of products are averages of the indexes for individual products. In such averages, the weight given to any one product index is determined by the 1939 importance of that product, value-wise, in the industry's output.

Any variation in the indexes must be interpreted

in terms of factors affecting individual plants. The indexes would not be affected, for example, by a tendency for the industry's output to concentrate in the most efficient plants, although such a development would reduce the average number of man-hours required by the industry as a whole to turn out a given machine. The question whether or not production tends to concentrate in the plants with lowest man-hour requirements is not within the scope of this report.

Influences Causing Trends

Individual plant trends, and therefore the resulting indexes, may be influenced by a wide variety of factors. These include the effect of the introduction of improved equipment and processes, management policies relating to production, the skill and efficiency of employees, and the degree of utilization of capacity. The indexes also reflect the effects of the many minor changes in product design which normally occur. The few major design changes which were made during the period of the survey took place in 1945. In these cases, data for the period in which the changes occurred were excluded from the indexes.

Despite considerable variation from product to product, the indexes (tables 1 and 2) disclose a general similarity in the pattern of behavior. Average man-hours expended per machine declined between 1939 and 1943, and rose in the following years. This behavior is discernible in the indexes for direct-labor man-hours only (table 2) as well as in the indexes for all factory labor (table 1).

The same pattern is significantly associated with the wartime rise and fall in the industry's total output, which is closely paralleled, practically without exception, in the production records of the reporting machine-tool plants. Many influences responsible for the behavior of unit labor requirements are closely connected with the changes in production volume.

Factors Tending to Raise Efficiency

Tool Design: The wartime increase in the scale of operations was huge in virtually all plants in the industry. The record-breaking volume of production encouraged adoption of large-scale production methods not practicable under normal peacetime conditions. Design of many standard

machine tools was frozen, thus presenting an unusual opportunity to produce large numbers of practically identical machines. Lot-sizes of parts going through production were greatly increased. Large lot-sizes meant that more was produced with a given set-up on a machine, and the importance of set-up time declined relative to output. Machines could be kept continuously busy on similar operations. Operators gained skill through repetitive practice. There was less switching between dissimilar plant production assignments and a more continuous flow of work for at least a part of the machines in the plant. The change was particularly notable in smaller plants which had been making machine tools in lots of 3 or 4 and were now able to work with lots of 20 or more. In a number of plants, concentration on quantity production of similar items was also promoted by the wartime elimination of some models.

The expanded volume of output of closely similar machines made it feasible to increase the use of jigs and fixtures. These work-holding devices make the performance of machine operations a much more routine matter. During the war, machine-tool plants found it expedient to provide special tooling for operations, which previous production volume had not warranted. In some larger plants, many operations in the making of popular models were already tooled up before 1939, but plants of all sizes found it advantageous to make use of new special tooling on some elements of their wartime output.

Labor Economies: Economies in labor utilization were achieved through greater specialization of organizational functions and subdivision of tasks. This was necessitated partly by the lower degree of skill, experience, and physical strength of new recruits to the labor force as well as by the larger production volume to be attained. Individual machine operators, many of them comparatively new at the job, were delegated less responsibility for set-up, maintenance and repair of machines, care of cutting tools, and conveying material through the plant. Since they could advantageously be kept busy on production all the time, it was economical to inaugurate or expand specialized staffs of set-up men and machine repairmen, specialized materials-handling departments, and tool-grinding sections.

Specialization of Labor: In assembly work, a number of plants reported division of the product into component subassemblies in order to facilitate production instituted or carried forward during the war. Final assembly, usually carried on by a small crew of men who put the machine together on an assembly floor, was thereby simplified. Extended use was made of power hand tools and portable grinders. The volume of wartime output permitted individual employees to specialize on fitting certain parts instead of spreading their efforts over a variety of assembly problems. Some simplification of assembly work, however, was intended to accommodate the lower physical strength of some new employees (particularly where women were employed on assembly), and did not result in a net saving of labor time.

Automatic Machinery: Most of the reporting plants installed an unusual amount of new equipment between 1939 and 1945. The new machines were generally far superior to the old in efficiency, and volume requirements permitted taking full advantage of their larger productive capacity. Some remaining overhead belt-driven apparatus was replaced by individual-motor-driven machines. The new machines were faster, more powerful, and often had centralized push-button controls and automatic work-cycle control features, making less demand on the operator for skill and physical strength. Hydraulic actuation in some applications made for smoother action and saved some of the time consumed by noncutting return strokes.

Machine tools of one kind sometimes replaced those of other kinds. Large planer-type milling machines were often substituted for the double-housing planers used in machining large castings. Similar in major structural elements to the planer, the millers used revolving many-toothed milling cutters instead of the single-edge planer tools. In cutting teeth in gears, special gear shapers were reported to display considerable advantage over hobbing machines in some applications.

Another development of primary importance was the increased use of cemented carbide cutting tools. Practically without exception, reporting plants indicated that they had materially extended their use of such tools. Cemented carbides, harder than tool steel, permit higher cutting speeds with

less frequent sharpening or adjustment of cutting edges. Especially on continuous large-volume operations, their use may substantially reduce machining time. The carbide-tipped tools did not by any means totally replace high-speed steel, and some of their wartime uses in machine-tool plants were contingent on the extraordinarily high level of production.

Machine-tool manufacturers modernized and added to their materials-handling facilities. Overhead electric hoists were mounted for use with individual machines, saving time or effort spent in operating hand hoists or in waiting until traveling cranes or other lifting facilities were available. Some 10- and 15-ton traveling cranes were installed for work on the assembly floor or to handle heavy castings at various points in the plant. Electric-battery-powered platform and fork trucks for conveying and storing parts and materials also expedited operations, replacing hand trucks in several instances. The additional equipment naturally added somewhat to the indirect functions of maintenance and repair.

In addition, mechanical aids to inspection, such as optical comparators, came into wider use. Conveyors proved advantageous in heat-treating departments, and induction or electric heat-treating furnaces replaced older types at a few reporting plants.

Rearrangement of Plant: The general expansion of facilities and replacement of equipment offered opportunities to improve efficiency by rearranging machines and whole departments of the plants. Over a period of years, some plants had grown with little or no over-all plan; they now managed to regain a more consistent segregation of machines and equipment, by type. Machines were rearranged to avoid obstructing factory traffic and to minimize travel and back-tracking of work in progress, and to reduce the volume of traffic from one floor to another. Departments were rearranged for similar reasons. For example, a lathe department was brought in closer proximity to the section where bar stock was received and stored.

A small reduction in labor requirements per machine manufactured resulted from the enforced simplification of the final paint job, which had as its purpose the conservation of scarce materials.

With the end of the war, the restriction of the use of scarce materials was abolished.

Subcontracting: The machine-tool industry engaged in subcontracting during the war; that is, arrangements were made with outside plants to produce parts or subassemblies, or to perform some machining that had previously been done entirely within the home plant. Thus additional plant capacity was made available. Some plants ceased subcontracting after unsuccessful trials, others resorted to it only on occasion or to a very small extent. Some difficulties arose in coordinating subcontractors' work with the needs of the home plants and in obtaining the desired precision of workmanship on subcontracted parts. Subcontracting should not be credited with much if any contribution to the reduction in unit labor requirements during the early war years. Changes in the degree of subcontracting are not significantly reflected in the indexes of unit man-hour requirements. The company reports included an estimate of the man-hours required on subcontracted work. When no satisfactory adjustment for changes in the level of subcontracting could be made, the report was discarded.

Factors Tending to Lower Efficiency

The influences responsible for the 1943-45 rise in the average number of man-hours required to produce a machine tool can be summarized under three heads. First, it was impossible to maintain the average level of employee skill, experience, and length of job-tenure at its prewar standard. Second, the relative importance of indirect labor functions as compared to direct was greatly increased during the period under discussion, partly because of the lowered skill and experience level. Finally, particularly during the latter part of the period, interruptions in supply of essential materials and components impeded production.

Inexperienced Personnel: While production was on the increase, neither of the first two developments was seriously detrimental; they were, in fact, natural concomitants of volume production. It was to be expected that with more continuous and standardized production, jobs could be simplified or broken down to require less skill, and auxiliary

services such as repair and materials handling would be delegated to specialized departments. As production in the machine-tool industry declined after 1942, however, the difficulty of retaining skilled and experienced personnel increased with the increasing pressure for manpower for other war production industries and the armed services. Indirect-labor functions, partly for this reason, were not readily contracted or transferred to direct workers, and were chargeable to a smaller volume of output. The result was a substantial rise in the total number of man-hours worked per machine produced (as reflected in the indexes of table 1), and a smaller rise in the number of direct-labor man-hours (table 2).

The change in character of labor force is made apparent by the phenomenal rise in employment in the industry, from about 36,600 wage earners in 1939 to more than 112,000 in 1942. The increase was accomplished only by hiring persons with little or no experience in factory work, including women and persons younger or older than are usually considered for employment in peacetime. Many who were hired during this period developed a high degree of competence in their work, but were subsequently lost to other industries or to the armed services. After 1942, employment declined in the industry, as did production. The requirement for man-power in the armed services and in general war production was reaching its height, however, so that turn-over was more rapid, and the difficulty of keeping or training skilled personnel was, if anything, more difficult. Even during the 1943-45 period of contraction in the labor force, the accession rate remained high. The decline in employment was thus not a simple reduction in force but a continuous turn-over of personnel in a gradually contracting staff.

An extraordinary increase in the average length of the workweek may have had a depressing effect on efficiency in some machine-tool plants. The industry as a whole reached a peak of 55 hours a week in January 1942, a higher level than that recorded in any other industry for which such data are compiled by the Bureau of Labor Statistics. Throughout the war, working hours in this industry remained high in relation to the general industry average.

Indirect-Labor Functions: The relative increase of indirect labor was general in the reporting plants.

The proportion of indirect to direct man-hours commonly increased by one-fourth to one-half, and in a few plants it virtually doubled during the period. In some plants this increase is solely responsible for the rise in man-hours per unit of product, no rise having taken place in direct-labor man-hours alone. The rise in indirect labor was the result of a number of factors. Functions were transferred to specialized indirect-labor departments because the demand for increased output warranted keeping personnel as steadily engaged on actual productive operations as possible. These functions sometimes had to be transferred to the specialized departments because of the lower skill or physical capacity of direct-labor machine operators. Finally, wartime conditions necessitated inauguration or substantial expansion of certain overhead functions that had not previously been required, at least not to so high a degree.

Examples of transfers of functions from direct to indirect labor were the adoption or extension of services of special set-up men where operators had previously set up their own work on their machines; increased dependence on specialized inspectors to check quality of work; increased delegation of routine repairs and maintenance to a special staff; extension of special tool-grinding departments to give skilled care to the dressing of expensive carbide-tipped and other tools while operators went ahead with production work; and expansion and mechanization of materials-handling functions. Among new or enhanced requirements chargeable to indirect labor were the extraordinary expansion of planning and scheduling departments to cope with the unprecedented volume of orders and the complexities of the wartime priority regulations, and more extensive general supervision and direction of work operations for the new workers in the labor force.

Many such changes were supported or even encouraged by a high volume of production. After the decline of production commenced, in 1943, the expanded indirect functions as already suggested, proved relatively inflexible and could not be contracted in step with production. They were thus responsible for a large share of the 1943-45 rise in unit man-hour requirements exhibited in table 1.

A pervading influence was at work during the war period which exerted an unfavorable effect on the production efficiency of most companies. The

major emphasis during the latter years covered by the report was necessarily placed upon maximizing production for the war effort, in many instances without regard to cost or to operating efficiency. Many plants were forced to abandon, in part, the cost-consciousness which constitutes an integral part of normal operations. In addition, in many individual plants, although management officials knew that increases in production above existing high levels could be effected only with higher unit costs, they were nevertheless required to increase their output to fill production schedules set by procurement agencies.

Variations in Trend

The degree and timing of the various influences so far enumerated differed from plant to plant, producing variations in the behavior of man-hour requirements in the individual plant reports. Some extraordinary declines in unit man-hours were attributed to the operation of new incentive systems. Some unusual increases were considered due to particularly large additions to indirect functions. These individual variations from plant to plant naturally show up in the product groups in tables 1 and 2.

When plants are grouped by size, it appears that the smaller plants have experienced a somewhat more favorable trend (table 3). These smaller plants had a greater opportunity for increasing efficiency in ways made possible by volume production, as above enumerated, since the largest plants were to some extent already enjoying such advantages at the outset of the period.

In the groupings by product, variations in trend may be explained to a considerable extent in terms of special circumstances, including size, affecting those plants reporting for each product. The

TABLE 3.—*Indexes of unit and direct-labor man-hours expended in manufacture of selected machine tools, by size of plant*

[1939=100]						
Companies ¹ employing—	Unit man-hours					
	1940	1941	1942	1943	1944	1945
Direct and indirect labor						
Over 1,000 wage earners.....	97.8	96.2	101.6	101.2	111.5	110.4
251-1,000.....	88.2	90.8	84.8	85.4	90.3	89.2
101-250.....	82.2	82.2	83.1	84.0	92.5	101.2
100 or fewer.....	92.1	71.3	76.7	81.9	83.8	86.6
Direct labor						
Over 1,000 wage earners.....	100.9	92.2	88.9	86.1	86.2	94.5
251-1,000.....	91.9	91.4	82.0	80.4	81.6	80.1
101-250.....	85.9	79.9	78.9	73.2	88.7	89.2
100 or fewer.....	94.1	84.0	81.6	85.7	85.7	90.1

¹ Reporting establishments are here classified according to the monthly average of wage earners employed during the year 1944.

techniques and problems involved in production of different types of machine tools, as well as the trends in production volume, are so similar for all kinds of machine tools that it is difficult to attribute variations in trend to peculiarities of the particular types of product as such. In the indexes for lathe-type machines (table 1) there was a drop between 1944 and 1945 which appears to have been common to most of the plants reporting lathes and not to those making other kinds of machine tools. Some manufacturers attributed this to the result of a greater complexity in lathe construction that forced an unusual rise in man-hours during the early years (between 1942 and 1944), which was to some degree corrected in 1945. Others suggest that the improvement in unit labor requirements is the result of a rise in production levels of lathe-type machines, which preceded other kinds of machine tools in demand by industries reconverting to normal production.

Perquisites Furnished Hired Farm Workers¹

AMERICAN FARMERS have traditionally furnished various kinds of goods and services to their hired workers in addition to payment of cash wages, such compensation being known as "perquisites." Although the importance of board and housing as perquisites has declined, particularly since the appearance of the automobile, many farm operators continue to provide houses, or rooms and meals, and to furnish such other items as food products from the farm, transportation to and from work, fuel, laundry services, and garden space or use of machinery, equipment, or work stock to workers who supplement their wages by producing a part of their own food. It has long been recognized that the provision of such perquisites adds to the farmer's labor costs and raises the compensation of hired hands appreciably above their cash wages.

Surveys made in 1945 by the United States Bureau of Agricultural Economics add substantially to the general knowledge of the extent of the practice, its distribution by kind and region, and the value of perquisites among hired farm workers.² The practice of furnishing perquisites was found to vary with the degree of regularity of employment and the type of farming involved, and, consequently, with the different regions of the country. Four-fifths of all regular hired farm workers, and three-fifths of the seasonal workers, received these additions at the time of the survey. The practice was most common in the North Central region and least common in the West, a

distinction partly attributable to the personalized relationships existing between farmers and their hired hands in the North Central States, and to the large-scale and specialized farming operations that require large numbers of seasonal workers for short periods in the West. In the South, the persistence of racial traditions and the prevalence of the sharecropper arrangement tend to reduce the importance of perquisites. There is what is known in the South as "furnish"—that is, goods provided tenants by plantation operators during the year and paid for by deductions from the tenant's share of the crop at the end of the year; these items are of course not to be classified as perquisites.

According to the survey, the value of perquisites averaged 93 cents a day for each worker receiving them, ranging from 65 cents in the South to \$1.46 in the North Central States. Perquisites amounted to 23 percent of the average farmer's total wage cost for regular workers, and to 9 percent of his cost for seasonal workers, indicating the greater reliance of the latter upon wage compensation. The provision of perquisites varied also according to the size of farms; perquisites represented 13 percent of total wage costs on very large farms and 25 percent on small farms. In every region, farmers provided more valuable major perquisites to the workers paid monthly wage rates, and progressively less valuable perquisites to workers paid weekly, daily, and hourly rates.

Out of each dollar's worth of perquisites furnished hired workers at the time of the survey, 53 cents was for meals, 26 cents for housing (of all kinds), and 21 cents for all other perquisites. In the Northeast and North Central regions, room and meals were the most common type of perquisite; in the South, a house or cabin; and in the West, bunk space. The monthly value of board (room and meals) averaged \$45, and showed little regional variation. However, the value of houses furnished hired farm workers varied regionally, adding about \$8 to the average monthly wage of such workers in the South and about \$21 in the North Central States. Nearly a sixth of the hired farm workers were provided garden space, and many of them also received other assistance.

¹ U. S. Department of Agriculture. Bureau of Agricultural Economics. Surveys of Wages and Wage Rates in Agriculture, Report No. 18: Perquisites Furnished Hired Farm Workers, United States and Major Regions, 1945. Washington, December 1946. (Mimeographed.)

² The main survey, made in May 1945 (May being a suitable month because it came between the seasonal trough and the seasonal peak of employment), involved visits by enumerators to a sample of 20,000 farm operators in 158 counties of the United States. The estimated total number of wage workers employed on farms at the time of the survey was 2,331,000. About one-sixth of these were either tenants or custom workers (persons whose hire includes machinery, equipment, or work stock) who worked for wages during some part of the survey week; and these were excluded from the survey of perquisites.

Sickness and Maternity Benefits for Railroad Workers

EFFECTIVE July 1, 1947, sickness and maternity benefits became available for the first time to railway employees who were already covered against wage loss for unemployment under the Federal Railroad Unemployment Insurance Act, as provided for by the amendments of July 1946.¹ Sickness benefits parallel those paid for unemployment and range from \$8.75 to a maximum of \$25 a week, depending on earnings of \$150 to \$2,500 and over for the previous calendar year. Benefits are paid for a period up to 26 weeks. Women railway employees who fulfill similar qualifications as to earnings are entitled to maternity benefits before and after childbirth for a maximum period of 116 days.

The amendments of 1946 to the Railroad Unemployment Insurance Act also liberalized the provisions of unemployment insurance. Maximum benefits were raised from \$20 to \$25 weekly, and maximum duration, from 20 to 26 weeks. At the same time, amendments liberalizing the Railroad Retirement Act were also enacted, thus providing, for the first time in this country, a unified Federal program of social insurance covering old age, permanent disability, death, unemployment, and sickness or injury (including maternity).

The new types of benefits are financed from employers' contributions for the maintenance of the railroad unemployment insurance program; the 3-percent rate on employee earnings (up to \$300 monthly) has remained the same under the amended law. In contrast to the State systems of cash sickness compensation in Rhode Island and California, railroad employees² do not contribute for such benefits under the Federal system.

Sickness and maternity benefits are administered as part of the unemployment insurance system by the Railroad Retirement Board.

¹ Public Law 572, 79th Cong., 2d sess., approved July 31, 1946. Other sources used in this article were Monthly Review, Railroad Retirement Board, Chicago, issues of March-June 1947; and 1946 Amendments to the Railroad Retirement and Railroad Unemployment Insurance Acts, by Jack M. Elkin (*in* Social Security Bulletin, Social Security Administration, Washington, December 1946, p. 23).

² Except employee representatives, who contribute at the rate of 3 percent of their earnings (up to \$300 a month) for unemployment insurance and are on a parity with employers in this respect.

Sickness Benefits

The amended law provides for protection against wage loss caused by "injury, illness, sickness, or disease," regardless of source. The disability may be mental, psychological, or nervous, as well as physical. Whereas a claimant for unemployment insurance must show that he is able to work, in case of sickness or injury the worker is eligible for benefits, under certain requirements, if he is unable to work and furnishes the specified evidence. The Railroad Retirement Board may prescribe special physical, medical, mental, or related examinations for either claimant or beneficiary.

To be eligible for sickness benefits, the worker, in addition to having earned at least \$150 during the previous base year, must serve an initial waiting period of 7 days in any consecutive 14 days (or registration period) within a benefit year, or a waiting period of 4 days in a later period during the same benefit year. He must file a claim within 7 days after the first day claimed, together with a prescribed "statement of sickness" completed by a licensed physician or by any officer or supervisory employee of a hospital, clinic, group-health association, or other similar organization, qualified to certify.³

Earnings requirement, base period, benefit year, daily benefit rate, and duration of benefits are substantially the same for both sickness and unemployment insurance.

A separate waiting period must be served for either sickness or unemployment benefits. Days of sickness and those of unemployment may not be combined in computing benefits for the registration period; but periods of unemployment and sickness may overlap. The fact, however, that an employee may have received unemployment insurance (or maternity benefits, or both) at some other time in the benefit year, does not affect the daily sickness benefit rate, nor the length of time a qualified worker may receive benefits, nor his eligibility.

Schedule of Benefits: Benefits range from \$1.75 a day, or \$8.75 a week (based on a 5-day week), for a worker whose base-year earnings ranged from

³ The Board is required by law to issue regulations for the qualification of such persons. All applications for sickness or maternity benefits must contain a waiver of any doctor-patient privilege, and information is to be held confidential except for use in court proceedings relating to benefit claims.

\$150 to \$200, to \$5 a day (\$25 a week) for those with earnings of \$2,500 or more. Annual benefits, payable for a maximum of 130 days (26 weeks) range from \$227.50 to \$650.

Base-year compensation—	Daily benefit rate (5-day week)	Maximum payable in benefit year (130 days; 26 weeks)
\$150 and under \$200.....	\$1. 75	\$227. 50
\$200 and under \$475.....	2. 00	260. 00
\$475 and under \$750.....	2. 25	292. 50
\$750 and under \$1,000.....	2. 50	325. 00
\$1,000 and under \$1,300.....	3. 00	390. 00
\$1,300 and under \$1,600.....	3. 50	455. 00
\$1,600 and under \$2,000.....	4. 00	520. 00
\$2,000 and under \$2,500.....	4. 50	585. 00
\$2,500 and over.....	5. 00	650. 00

Maternity Benefits

A female employee who has earned \$150 or more in railroad work during the previous base year and submits a statement of maternity sickness from her physician, showing the expected birth date of her child, may receive benefits. No waiting period is prescribed.

Maternity benefits are paid for a maximum of 116 days, beginning 57 days before the expected birth and continuing at least until the 31st day after the birth of her child, whichever is later. Benefits, however, are not paid for more than 84 days of sickness in a maternity period prior to birth. The daily benefit is the same as for sickness and unemployment, except that rates for the first 14 days of the maternity period and for the 14 immediately following birth in the "maternity period" are $1\frac{1}{2}$ times the regular daily rate. This results in the equivalent of the scheduled benefit rate for as long as 130 days—the same as for the other two types of benefits.

Once maternity rates become payable, they continue to the end of the maternity period, even though this extends into the next benefit year, provided the employee has earned \$150 in the original base year.

It was estimated that maternity benefits in an ordinary year would be paid to fewer than a half of 1 percent of railway employees who receive sickness benefits.

Disqualifications

An employee may not receive benefits for the same days which entitle him to pay, such as regular wages, pay for time lost, vacation pay,

sick leave with pay, etc.; nor for the days that he worked in certain railroad occupations for earnings above a certain amount. Excluded also are the days covered by damages for injury and by certain social security payments under State or Federal laws. Exception is made for the payment of the difference if the retirement benefits paid to the worker under either the Railroad Retirement Act or the Federal Social Security Act are less than the sickness benefits which a worker is entitled to receive under the new law. If damages received are less than benefits paid, the total sum received must be refunded to the Board; otherwise, an amount equal to benefits must be refunded.

Receipt of benefits under a nongovernmental plan of sickness or maternity insurance does not disqualify the worker from receiving benefits under the Railroad Unemployment Insurance Act.

The law imposes a disqualification of 75 days in each claim period affected by fraud; also a maximum penalty of \$10,000 fine or 1 year of imprisonment, or both.

Great Britain: Interim Index of Retail Prices

THE MINISTRY OF LABOR announced that the former cost-of-living index was to be terminated with the June 1947 index figure and that an interim index was to begin in July.¹ Prices for the new index, which will take June 1947 as equal to 100, are to be collected on the Tuesday nearest the 15th of the month; thus prices obtained on June 17 will serve as the base for the index.

The establishment of an interim index in place of the former series is in accordance with the recommendations made in March 1947 by the Cost-of-Living Advisory Committee² which was appointed by the Ministry to consider the question of revising the former index. The Committee included representatives of employers, trade-unions, the cooperative movement, the retail distributive trades, and women's institutes. No mention was made in the Committee report of the

¹ Interim Index of Retail Prices, Ministry of Labour and National Service, 1947.

² Report of the Cost-of-Living Advisory Committee to the British Ministry of Labor and National Service, London, 1947 (Cmd. 7077).

effect of the interim index on current wage agreements concerning escalator clauses tied to the former index.

The discontinued series was started early in World War I; the items priced and the relative importance assigned to each was based on the 1914 (in some cases 1904) pattern of consumers' expenditures. Because of the great changes in consumption habits since then, the index was "quite out-of-date," according to the official view.

The interim index is to be based on the 1937-38 pattern of consumers' expenditures, the Ministry stated, and it will be continued until it is possible to make a new study of consumers' purchases which will serve as a basis for a permanent index. The differences in weights between the interim index and the discontinued series which were assigned to the major groups of expenditures are as follows:

	Weight of group in — 1914 index	New index allowing for June 1947 prices
Food.....	60	35
Rent and rates.....	16	9
Clothing.....	12	9
Fuel and light.....	8	7
Other items in 1914 index.....	4	16
Total: Items covered by 1914 index.....	100	76
Items not covered by 1914 index.....	--	24
Total.....	--	100

Among the additional items to be priced for the interim index are fresh fruits and vegetables, children's clothing, furniture, appliances (radios, etc.), medicines, entertainments, shoe repairs, and laundry service.

Great Britain: Housing Program for 1947¹

IN JANUARY 1947 the British Government for the first time published a year's target, or housing program, which contemplated the completion of

¹ Data are from Great Britain, Ministry of Health: Housing Program for 1947 (Cmd. 7021), London; Housing Return for England and Wales, March 31, 1947 (Cmd. 7113), Department of Health for Scotland—Housing Return for Scotland, March 31, 1947 (Cmd. 7114).

240,000 new permanent houses and an additional 60,000 temporary houses in 1947. Another 200,000 houses, it was estimated, would be under construction by the year's end, and tenders approved or licenses issued² for 100,000 not yet started.

TABLE 1.—Housing construction, by region, end of 1946 and estimated for 1947¹

Region	Number of houses			
	End of 1946			1947
	Completed	Under construction	In tenders or licensed ²	Estimated to be completed
Total, United Kingdom.....	58,206	203,719	114,554	240,000
England and Wales.....	52,332	171,352	89,410	216,000
London.....	6,170	30,132	14,628	36,000
Scotland.....	5,874	32,367	25,144	24,000

¹ Data are from Housing Program for 1947 (Cmd. 7021), p. 8.

² Not yet started.

The accomplishments as they stood at the end of 1946 and the estimates for 1947 are shown in table 1. These totals were subdivided according to type of housing, for houses under construction, or approved but not yet started (table 2).

TABLE 2.—Housing under construction, or approved but not yet started, by type, end of 1946 and estimated for 1947¹

Type	Number of houses		
	End of 1946		1947
	Under construction	In tenders or licensed ²	Estimated to be completed
All types.....	203,719	114,554	240,000
Built by local authorities:			
Traditional houses.....	126,030	70,759	125,000
Nontraditional houses.....	28,426	30,798	65,000
Rebuilding of war-destroyed houses.....	14,820	2,619	15,000
Other houses.....	34,443	10,378	35,000

¹ Data are from Housing Program for 1947 (Cmd. 7021), p. 6.

² Approved but not yet started.

During the first quarter of 1947, about 6,000 permanent houses were completed by local authorities—about a fifth of the quarterly quota which the 1947 target implied. This slowing down was caused by the severe winter, the fuel crisis, and the ensuing shut-down of industries. According to the Housing Returns for March 31, 1947, "there seems now to be no possibility of securing

¹ In the nature of permits. "Tenders approved" is used in connection with houses to be built by local authorities; "licenses issued," when they are to be built by private persons.

during this year the 240,000 completed houses which was a reasonable estimate when the housing program for 1947 was published." It was decided to push for completion of as many as possible of the 218,783 houses on which construction had been started during the first quarter, and to reduce the number of new approvals without, however, revising the year's target.

Turkey: Change in Legal Status of Labor Unions and Employers' Associations¹

THE TURKISH LAW of February 22, 1947, marks a further development in the new Turkish labor policy inaugurated by the creation of a Labor Ministry in 1945. The previous policy of the Turkish Republic, under the direction of Kemal Ataturk and Ismet Inonu and their People's Party, was to discourage any social groupings not connected with this party. The basic Labor Code of the Republic (Law No. 3008, of June 8, 1936) provided for the representation of labor in the settlement of labor disputes; however, only labor delegates for individual establishments—not labor unions—were authorized to exercise this function. Two years later, Law No. 3512 on Associations (June 28, 1938) expressly forbade associations based on occupational groups. In 1946, the Law on Associations was modified and various kinds of associations were permitted, among them labor organizations. This general permission has been replaced by more detailed legislation embodied in the 1947 act, which covers both workers' and employers' associations.

The purposes of unions and employers' associations, as defined by the 1947 law, are mutual aid, the protection of common interests, and the representation of their members. Neither type of association is allowed to engage in politics. In the language of the law, such an association cannot "serve as an instrument for the activities of any political organization whatsoever," and associations "cannot conduct themselves in a

manner contrary to nationalism and national interest." They are supervised by the Minister of Labor and can be closed by court decision temporarily, or even permanently, if they violate these principles.

With the consent of two-thirds of their membership, unions (and employers' associations) may join federations. Such federations are subject to the provisions of the 1947 law. This would mean, in particular, that they too are forbidden to indulge in political activities or to cooperate with political organizations.

Union Membership and Activities

Only manual workers may join unions, and they may remain members only as long as they are actually active as workers. Membership is voluntary; provisions contrary to this rule cannot be included in labor contracts or factory regulations.

The members of an individual union "must work in the same branch of work or in work related to this branch." Whether this provision implies organization on an industrial or on an occupational basis, is not clear from the available information. More than one union may be organized for "the same branch of work."

The unions are authorized by article 4 of the law to (1) conclude collective agreements; (2) cooperate with the arbitration authorities in the settlement of labor conflicts; (3) participate in the administration of social insurance and of the public employment service (both of which are now being developed in Turkey); (4) establish funds of mutual aid for protection against sickness, permanent disability, death, and unemployment; (5) create institutions for health, sport, and education of their members; and (6) create producers' and consumers' credit and housing cooperatives.

Strikes and Lock-Outs

Although the law carries no new provisions on labor disputes, the representatives of unions and of employers' associations are expressly warned against encouraging strikes or lock-outs which are illegal under the Labor Code of 1936. In case of contravention, the organizations may be suspended by court decision.

Not all collective work stoppages are forbidden by the Labor Code of 1936. Articles 73 and 74 of this basic law carry somewhat involved defini-

¹ Based on the translation of Turkish Law No. 5018 of February 22, 1947. Enclosure to despatch No. 1500, United States Embassy, Ankara, March 20, 1947.

tions of the terms "strike" and "lock-out" which have the effect of permitting minor labor disputes, provided that they do not lead to the closing-down of the whole establishment or of an important part of it. Sympathy strikes are always forbidden.

Minister of Labor's Interpretations

Statements made by the Turkish Minister of Labor when the draft of the law was discussed in the National Assembly give some insight into the objectives of the new legislation. According to the Minister, many local unions sprang up after the Law on Associations was amended in 1946 to permit associations based on occupation. Some of these were genuine unions; others were political in character and were directed by persons who had no relation to the type of labor represented in the union. Under these conditions, the workers themselves asked for guidance and direction by the Government, the Minister said. In discussing the Government's policy in relation to labor disputes, the Minister observed that, under the Turkish Labor Code, the State (according to its general philosophy, called "Etatism" in Turkey) acts as arbitrator in disputes between labor and employers. Since arbitration is obligatory, there is no room for strikes or lock-outs.

Antidiscrimination

Legislation in 1947¹

CONNECTICUT BECAME the fourth State with a comprehensive act prohibiting discrimination in employment as a result of legislation adopted in 1947 to broaden the powers of the Interracial Commission. This Commission was established in 1943 but its only power was to make investigations and compile facts concerning discrimination in employment. The only other legislation on this subject enacted in 1947 was an Oregon law. However, this law merely expresses the State policy as being opposed to any discrimination in employment.

The revised Connecticut law is quite similar to the laws previously enacted in Massachusetts,

¹ Prepared in the Division of Labor Standards of the U. S. Department of Labor.

New Jersey, and New York. The law enumerates a series of unlawful employment practices applicable to employers, labor organizations, and employment agencies. Employers of fewer than 5 employees are exempt and the law does not cover domestic employment.

Employers are forbidden to discharge or discriminate against any person in terms, conditions, or privileges of employment because of race, color, religious creed, national origin, or ancestry. Labor organizations are prohibited from excluding or expelling from membership or from discriminating against any of their members or against any employer or any of his employees for these reasons, unless such action is based upon a bona fide occupational qualification. The law further declares that it shall be unlawful for an employment agency, except in the case of a bona fide occupational qualification or need, to fail or refuse to classify properly or refer for employment or otherwise to discriminate against any person because of his race, color, religious creed, national origin, or ancestry. Employers, labor organizations, and employment agencies are all prohibited from discriminating against any person for opposing practices forbidden by the act or for filing a complaint or testifying under the act. In addition, it is unlawful for any person to attempt to aid, compel, or coerce performances of any acts forbidden by the law.

The revised law authorizes the Interracial Commission to attempt to eliminate unfair employment practices through persuasion and conciliation, to hold hearings, and to issue cease and desist orders. Complaints of unlawful employment practices are investigated by the Commission through investigators or directly by one of the commissioners. If the commissioner or investigator determines after a preliminary investigation that the complaint may be justified, he is directed to endeavor to eliminate the unfair employment practice by conference, conciliation, and persuasion. In case of failure to eliminate these practices, a hearing tribunal drawn from a panel is authorized to make findings of fact and issue an order requiring the employer or other party to cease and desist from the unfair employment practice. Orders of the hearing tribunals are enforceable by the courts.

The Oregon law declares it to be the policy of the State to encourage the employment of all

persons in accordance with their fullest capacities regardless of their race, color, religion, sex, union membership, national origin, or ancestry. It further declares it to be against the policy of the State for any political or other representative of the State or its political subdivisions to discriminate against any person with respect to hire, terms, or conditions of employment. There is no provision for enforcement. However, the State Department of Education is authorized to prepare educational programs to discourage prejudice against minority groups.

Portal-to-Portal Act of 1947¹

THE PRIMARY PURPOSE of the Portal-to-Portal Act of 1947 (Public Law 49, 80th Cong., 1st sess. May 14, 1947) is to relieve employers and the Government from potential liability for billions of dollars in so-called portal-to-portal claims which arose under the Fair Labor Standards Act. One thousand nine hundred and thirteen of these cases, aggregating a total claim of nearly 6 billion dollars, were filed in the United States courts in the period July 1, 1946, to January 31, 1947.

To understand the reason for this sudden volume of litigation, it is necessary to review some legal developments under the Fair Labor Standards Act of 1938. Section 6 of this act states that each employer shall pay to each of his employees engaged in commerce or in the production of goods for commerce not less than 40 cents an hour. Section 7 provides that an employer shall not employ any of his employees engaged in commerce or in the production of goods for commerce for a "workweek" longer than 40 hours, unless such employee is paid time and one-half the regular rate of pay for such overtime. The Fair Labor Standards Act contains no concise definition of "work" or "workweek." Numerous judicial decisions have dealt with this problem. In *Tennessee Coal Co. v. Muscoda Local* (321 U. S. 590) and *Jewell Ridge Coal Corp. v. Local 6167* (325 U. S. 6161), the Supreme Court held that time spent by miners in traveling underground between the portal and

the working face of mines was required to be included in the "workweek" and must be so compensated.

In these cases the Supreme Court indicated that time spent by employees in an activity which involved "physical or mental exertion (whether burdensome or not) controlled or required by the employer and pursued necessarily and primarily for the benefit of the employer and his business" must be included in the statutory workweek and compensated accordingly, regardless of contrary custom or contract. On June 10, 1946, the Court handed down the decision in *Anderson v. Mt. Clemens Pottery Co.* (328 U. S. 680), which applied the above rule to time spent in walking to work on the employer's premises and time spent in such activities as putting on aprons and overalls, removing shirts, taping or greasing arms, putting on finger cots, preparing equipment for work, turning on switches for lights and machinery, opening windows, and assembling and sharpening tools. All of the time spent in these activities, the Court held, must be counted as hours worked, with the exception of time that is to be regarded as falling within the de minimus rule.²

Individual employees and unions relied on the Supreme Court decision in bringing the above-mentioned suits for back wages under the Fair Labor Standards Act.

When the Congress convened in January of 1947, bills were immediately introduced to remove the potential liability which had been created. The House of Representatives, on February 28, 1947, passed H. R. 2157. This bill made no distinction between past and future claims. It would have barred all actions based upon the failure of an employer to pay in accordance with the statute for activities engaged in by his employee unless those activities were compensable either by custom or practice or by an express agreement in effect at the time of the activity. It would also have provided for a 1-year statute of limitations and would have permitted an employer to invoke a good-faith defense if he could plead and prove that the act or omission complained of was consistent with, required by, or in reliance on any decision of a court of record in connection with which he was a party in interest, or on any administrative regulation,

¹ Prepared in the Solicitor's office of the U. S. Department of Labor.

² The de minimus rule has been defined as meaning that "The law does not care for, or take notice of very small or trifling matters." Black's Law Dictionary, Third Edition.

order, ruling, interpretation, approval, enforcement policy or practice. H. R. 2157 also permitted the compromise or settlement of claims and provided that courts could award an amount not to exceed the amount specified as penalty or damage in the law under which the action arose if the violation was in bad faith and without reasonable ground. The provisions of the bill were applicable not only to the Fair Labor Standards Act but to the Walsh-Healey Act and the Davis-Bacon Act as well.³

In the Senate, H. R. 2157 was completely rewritten. As passed by the Senate it provided that no employer would be subject to any liability or punishment under the Fair Labor Standards Act, the Walsh-Healey Act, or the Davis-Bacon Act on account of the failure of the employer to pay minimum wages or overtime compensation for any activity engaged in prior to the date of enactment of the act, except those activities that were compensable by contract or custom or practice. The Senate version also contained a section, later removed in conference, which was intended to become effective only if the courts should invalidate the effort to remove liability for past claims. This section provided that as to past claims there would be no recovery for liquidated damages, no award of attorneys' fees, a placing of the entire burden of proof upon the employee, and an approval of settlements or compromises. As to claims arising after the passage of the act, the Senate version barred recovery for activities engaged in before or after the performance of the employee's principal activities for the workday including walking, riding, or traveling, or for activities preliminary to or postliminary to the employee's principal activities unless such activities were compensable by contract or by custom or practice. This version also contained a 2-year statute of limitations. It also contained a section which freed an employer from liability for liquidated damages and from criminal penalty if he acted in good faith in accordance with or in reliance on any regulation, order, interpretation or ruling in writing; in the case of the Fair Labor Standards Act, such regulation, etc., must have been that of the Wage and Hour Administrator, and in the case of the Walsh-Healey Act, it must

have been that of the Secretary of Labor or a Federal official utilized by him in the enforcement of the act. This section applied to both past and future claims.

The conference bill followed in general the form of the Senate bill but incorporated some of the provisions which had been in the House bill.

Following is a summary of the provisions of the Portal-to-Portal Act of 1947.⁴

Claims Arising Prior to May 14, 1947

Section 2 of the Portal-to-Portal Act relieves an employer from liability or punishment under the Fair Labor Standards Act, the Walsh-Healey Act, or the Davis-Bacon Act, because of his failure to pay an employee minimum wages or overtime compensation for any activity engaged in prior to the date of enactment (May 14, 1947), except an activity compensable by express provision of a written or nonwritten contract, or by custom or practice, not inconsistent with such a contract, in effect at the time of the activity at the employee's place of employment. No Federal or State court is to have jurisdiction of any action, whether instituted prior to or on or after the date of enactment of this act, which seeks to enforce any liability or impose any punishment with respect to an activity not compensable under section 2. Claims barred by section 2 are not assignable.

This act validates compromises heretofore or hereafter made of any cause of action under the Fair Labor Standards Act, the Walsh-Healey Act, or the Davis-Bacon Act, which accrued prior to enactment of this act, or of any action thereon, if a bona fide dispute exists as to the amount payable by the employer to his employee; except that such compromise may not be based on an hourly wage rate of less than the statutory minimum or on an overtime rate of less than one and one-half times the minimum hourly rate. An employee may waive his right to liquidated damages under the Fair Labor Standards Act, but only with respect to claims arising before the enactment of the act. Any such waiver or compromise, in the absence of fraud or duress, is a complete satisfaction and is a bar to any further action based on such cause of action.

³ The Walsh-Healey Act and the Davis-Bacon Act establish minimum labor standards which must be observed in the performance of supply and construction contracts for the Government.

⁴ This digest is intended merely as a summary of the Portal-to-Portal Act of 1947 and is not to be construed and may not be relied on as an interpretation of this Act by the Administrator of the Wage and Hour Division or the Department of Labor.

Actions on employees' minimum-wage or overtime-compensation claims arising prior to May 14, 1947 may be commenced within 120 days of that date unless barred by an applicable State statute of limitations; otherwise, such actions may be commenced within a 2-year period or the period fixed by the applicable State statute of limitations, whichever is shorter. Actions are deemed commenced by the filing of the complaint; or, as to an individual claimant in a collective or class action, who is not named as a plaintiff in the complaint, when he files in court his written consent to become a party plaintiff. Section 8 of the act provides a method for determining when actions shall be deemed to have been commenced for employees involved in collective and representative suits pending on May 14, 1947.

The act provides a defense, in actions or proceedings under the three acts (Fair Labor Standards, Walsh-Healey, and Davis-Bacon Acts) for violations of the minimum wage or overtime provisions occurring prior to May 14, 1947, where an employer pleads and proves that he acted in good faith in conformity with and in reliance on any administrative regulation, order, ruling, approval, or interpretation, of any agency of the United States, or any administrative practice or enforcement policy of any such agency with respect to the class of employers to which he belonged.

In employee actions brought to recover unpaid minimum wages or unpaid overtime compensation under the Fair Labor Standards Act, the Portal-to-Portal Act permits the court "in its sound discretion" to award less than the "additional equal amount" as liquidated damages as previously required, or none at all if the employer shows that he acted in good faith and had "reasonable grounds" for believing he was not violating the Fair Labor Standards Act.

The act provides a defense under the Fair Labor Standards Act for an employer who, prior to the date of the new "area of production" regulations (December 25, 1946), engaged in specified activities within the "area of production" as that term was defined by regulations applicable at the time, even though those regulations were then invalid. The same defense is provided for an employer who prior to the enactment of the new regulations, operated within the "area of production" as that term is defined in the new regulations.

Claims Arising on or After May 14, 1947

The Portal-to-Portal Act relieves an employer from liability or punishment under the Fair Labor Standards Act, the Walsh-Healey Act, or the Davis-Bacon Act, because of his failure on or after May 14, 1947, to pay an employee minimum wages or overtime compensation for the following activities: walking, riding, or traveling to and from the place where the principal activity is performed, or activities "preliminary" or "postliminary" to the principal activity, which occur either prior to the time on any particular workday at which such employee commences, or subsequent to the time on any particular workday at which he ceases, such principal activity, unless such activities are compensable at the time of their performance by either an express provision of a written or nonwritten contract, or a custom or practice at the place of employment not inconsistent with such a contract.

The act provides a 2-year statute of limitations for actions on employee wage claims arising on or after May 14, 1947, under the Fair Labor Standards Act, the Walsh-Healey Act, or the Davis-Bacon Act. It provides that on or after May 14, 1947, actions shall be deemed to have been commenced, for the purposes of the statute of limitations, with the filing of a complaint, and in the case of a plaintiff in a joint action who is not named in the complaint, with the filing of his written consent in court.

With respect to claims arising on or after May 14, 1947, a defense from liability or punishment is provided for an employer who pleads and proves that he acted in good faith in conformity with and in reliance on any written administrative regulation, order, ruling, etc., of the Administrator of the Wage and Hour Division in the case of the Fair Labor Standards Act, of the Secretary of Labor or "any Federal officer utilized by him in the administration of such act" in the case of the Walsh-Healey Act, or of the Secretary of Labor in the case of the Davis-Bacon Act.

In any employee action brought under the Fair Labor Standards Act on future wage claims, as in the case of past claims, the act would permit the court "in its sound discretion" to award less than the "additional equal amount" as liquidated damages as previously required, or none at all if the employer shows that he acted in good faith and

had "reasonable grounds" for believing he was not violating the act.

The act amends section 16 (b) of the Fair Labor Standards Act so as to bar the bringing of employee suits under that statute by agents or representatives designated by employees. However, collective or class suits brought by employees in behalf of themselves and other employees similarly situated are still permitted.

The Portal-to-Portal Act adopts by reference certain definitions appearing in the Fair Labor Standards Act, the Walsh-Healey Act, and the Davis-Bacon Act.

Comparative Employment Levels: Construction Projects, 1941-47

CONSTRUCTION PROJECTS include all types of work in connection with the erection of new buildings and nonbuilding facilities such as roads, bridges, power lines, and other immovable structures. In addition to work on new buildings and other new facilities, construction projects include alterations, additions, and repair work of the type usually requiring local building permits. Maintenance

operations which do not involve structural repairs, however, are not included in this category.

Estimates of average employment on the different kinds of construction projects which were in progress in the United States during the period 1941-47 are presented in the accompanying table. All types of workers actively engaged on such construction projects are included in the estimates (i. e., wage earners, salaried employees, working proprietors, and self-employed persons). Force-account workers¹ and other employees of nonconstruction (or multi-industry) firms who may engage in construction activities are also covered, as well as all workers employed by construction firms either at or off the site of construction projects. These estimates should not be confused with the contract construction employment figures presented in the statistical section of this publication (tables F-1 to F-8, pp. 268-273), which cover all employees of construction contractors, but exclude all force-account workers and other employees of nonconstruction firms, self-employed persons, and working proprietors. The two series cannot be compared directly, therefore, since their coverage is different.

¹ Force-account employees are workers hired directly by a business or government agency (instead of through a contractor) and utilized as a separate work force to perform nonmaintenance construction work on the agency's own properties.

Estimated average employment on construction projects in the United States, by type of project, 1941-47

Type of construction	Quarterly averages (in thousands)						Yearly averages (in thousands)					
	1947		1946				1946	1945	1944	1943	1942	1941
	Second ¹	First	Fourth	Third	Second	First						
All types.....	1,861	1,633	2,087	2,237	1,793	1,296	1,853	967	762	1,338	2,214	2,446
New construction.....	1,616	1,436	1,816	1,950	1,518	1,067	1,587	770	658	1,244	2,066	2,233
Private construction.....	1,212	1,142	1,359	1,512	1,238	876	1,246	488	271	287	578	1,210
Residential building (nonfarm).....	528	483	572	604	443	275	474	129	88	118	256	627
Nonresidential building (nonfarm).....	406	466	567	628	577	457	557	200	66	47	142	324
Farm construction.....	85	29	50	114	65	22	63	33	17	23	43	75
Public utilities.....	193	164	170	166	153	122	152	126	100	99	137	184
Public construction.....	404	294	457	438	280	191	341	282	387	957	1,488	1,023
Federal.....	185	171	277	229	144	100	187	225	344	909	1,372	841
Residential building.....	31	68	135	94	43	15	72	11	28	85	76	85
Nonresidential building.....	28	17	25	26	29	41	30	156	222	598	1,021	571
Reclamation.....	16	13	12	10	9	7	9	7	14	27	43	34
River, harbor, and flood control.....	25	25	32	26	20	18	24	17	22	32	38	35
Streets and highways.....	71	35	53	58	30	10	38	10	16	30	50	69
All other ²	14	13	20	15	13	9	14	24	42	137	144	47
Non-Federal.....	219	123	180	209	135	90	154	57	43	48	116	182
Streets and highways.....	86	42	88	97	57	26	67	28	27	37	86	115
All other ²	133	81	92	112	78	64	87	29	16	11	30	67
Minor building repairs.....	245	197	271	287	275	229	266	197	104	94	148	213
Residential (nonfarm).....	82	55	71	85	91	69	80	49	35	27	40	77
Nonresidential (nonfarm).....	95	91	114	132	127	116	122	89	38	37	51	44
Farm.....	68	51	86	70	57	44	64	59	31	30	57	92

¹ Preliminary.

² Mainly airports, water and sewer systems, and electrification projects.

³ Includes community buildings, water-supply and sewage-disposal projects, and miscellaneous public-service enterprises.

The main purpose of the data presented here is to provide an indication of the comparative amounts of employment involved at different times in various types of projects, both public and private. These employment estimates are derived primarily by the conversion of dollar expenditure figures for construction projects into man-months of employment ordinarily required to perform the work associated with these expenditures. The general procedure followed for other-than-Federal projects is to compute, for each major type of construction, an estimate of expenditures and an estimate of the value of such work done or put-in-place in 1 month by the average worker. Dividing the expenditure estimate by the figure for average monthly value of work per man results in the average employment estimate for the particular type of construction. In the case of Federal construction, however, reports on employment are obtained directly from the contractors involved.

The estimates of expenditures for new construction upon which these employment figures were based were prepared jointly by the Bureau of Labor Statistics and the Office of Domestic Commerce from building permit reports submitted regularly to the Bureau, records of the F. W. Dodge Corp. on contracts awarded, reports of government agencies, and other sources. An estimate of the value of work performed per man-month for each major type of construction was derived from data on employment and work performed as reported in the 1939 Census of Construction, and adjusted from month to month in other years according to changes in average hourly earnings, hours worked per week, and material prices, based on regular reports to the Bureau by thousands of cooperating firms. The resulting man-month factors have been checked periodically by an analysis of data collected by the Bureau for various types of completed projects.

It should be recognized that employment estimates derived in this manner have certain limitations. For instance, it has been necessary to assume that contractors' overhead and profit remain a constant percentage of total cost, yet this percentage undoubtedly changes with market conditions and also changes slowly as the result of mechanization and other developments in operating methods. Another assumption which produces a certain amount of error in the employ-

ment figures is that productivity per man-hour is constant. Changes in productivity are ordinarily slow, but can be fairly rapid when technological developments occur. During periods of shortages and other conditions of disorganization similar to those of the recent past productivity changes can be especially rapid and erratic. Sufficient information is not available at this time to adjust for these factors.

Despite these limitations, the figures presented in the accompanying table provide a general indication of the relative importance of the various kinds of construction projects in the United States at different times, in terms of manpower involved in their operation. In making any analyses or interpretations based on these employment estimates, however, it is important that the basic estimating techniques and assumptions used in their derivation be clearly understood. Beginning with this issue these estimates will be presented on a quarterly basis.

Labor-Management Disputes in July 1947

WITH THE RETURN TO WORK of bituminous-coal miners early in July 1947 after the 10-day vacation and the completion of new contracts with mine owners, the largest continuing controversy of the month involved a portion of the Nation's shipyard workers. Other labor-management disputes which had reached a work stoppage stage were relatively small. One, a strike of approximately 7,000 Detroit auto-parts employees of the Murray Corp. of America in late July, assumed some special significance, because the union—the UAW-CIO—regarded it as a testing ground for “fundamental principles” involving the new Labor Management Relations Act, 1947. These principles were described by Walter Reuther, international president of the United Automobile, Aircraft and Agricultural Implement Workers, as establishing union financial immunity in event of “wildcat” strikes. This immunity would be provided through a new contract clause which would stipulate that the company and the union would settle all controversies without recourse to the

National Labor Relations Board. Within a week's time the Murray stoppage had cut off a flow of parts to several auto-assembly plants and threatened to result in widespread lay-offs of workers.

Shipyard Strike

The Nation-wide shipbuilding and repair yard strike expanded during July and by the end of the month had involved approximately 75,000 workers in over 20 major yards on all three coasts. The strike began June 26 when approximately 42,000 members of the Industrial Union of Marine and Shipbuilding Workers of America (CIO) ceased work in 10 East Coast shipbuilding and repair yards to enforce wage demands.

Pre-strike negotiations between union officials and representatives of the Bethlehem Steel Co., owners of 9 of the initially struck yards, had scaled down the union's demands from 25 cents per hour plus repair-work differentials, to 13 cents per hour, 6 paid holidays, and establishment of an 11.6-cent differential for repair work. These compromises failed to avert a stoppage.

By July 7 some 67,000 workers on three coasts were reported idle as additional yards joined the walk-out. Work at the plants of the Todd Shipyards Corp., second largest employer involved in the dispute, was continued, however, by mutual agreement to extend the existing contract. Prior to the later termination date of July 23 a tentative agreement, the first major development in the union's negotiations with the shipbuilders, was reached which provided a 12-cent hourly wage increase, improved vacations and working conditions, and other benefits. Employees of the Todd Corp., Brooklyn yard, however, failed to ratify the agreement immediately and suspended work for several days. This stoppage, together with another involving some 2,000 workers at the Higgins Industries shipbuilding and repair yards in New Orleans, brought the total number affected by the controversy to over 75,000. Settlements affecting the Todd Brooklyn yard, the Higgins Industries, and a number of small ship-repair yards in the Philadelphia area, however, resulted in a decline of the estimated idle to 65,000 by the end of July.

Brief Stoppage on Southern Pacific

A brief strike occurred on the Southern Pacific Railroad when its engineers, members of the Brotherhood of Locomotive Engineers (Ind.), left their cabs at 6 p. m., July 21, after prolonged negotiations between the carrier and union officials failed to bring about an acceptable solution to the union's demands for some 19 changes in working conditions. Train service was resumed in the early morning hours of July 22, following announcement that 14 of the union's demands were satisfactorily compromised. President Truman several days earlier had designated an emergency fact-finding board under the Railway Labor Act to consider the controversy, but the board had not yet convened at the time of the strike. Recommendations of a similar emergency board in 1945 had failed to settle many controversial issues which were subsequently embodied in the present dispute.

Remington Rand Dispute

Representatives of the International Association of Machinists (Ind.) and officials of the Remington Rand Corp. reached an agreement on July 31, 1947, thereby completely terminating a 2-month strike that had involved some 15,000 members of the IAM and the United Electrical, Radio and Machine Workers of America (CIO) in 7 cities in New York and Michigan.

Initial strike action occurred May 26 when approximately 6,000 employees, members of the machinist's union, left the company's Elmira, N. Y., plant to enforce a demand for a wage increase of 15 cents an hour. On June 18 the stoppage spread to other plants of the company when members of the United Electrical, Radio and Machine Workers of America left their jobs to enforce similar demands. By the end of June nearly 9,000 UERMWA members, in addition to machinists, were idle.

The first break in the long stoppage, which at times had been marked by physical clashes and abortive back-to-work movements, came on July 27 when officials of the radio and electrical workers' union and company representatives reached an agreement providing for an 8-cent hourly wage increase, 6 paid holidays, and provision for arbitration of additional wage adjust-

ments. A few days later, on July 31, a generally similar offer was accepted by the machinist's union covering the Elmira plant.

Collective Bargaining For Employment of Handicapped

JOBS FOR THE HANDICAPPED through collective bargaining are advocated by the American Federation of Labor in a recent brochure.¹ It is suggested that local unions endeavor to secure the adoption of a plant policy for the employment of disabled veterans and other handicapped workers on the basis of their ability to perform satisfactorily and safely on the specific jobs for which they are otherwise qualified. This would entail an analytic approach to job placement and subsequent procedure.

The collective agreement would provide for a joint employment committee that would "determine all matters pertaining to the employment, reemployment, and transfer of disabled veterans and other impaired workers, with arbitration in case of dispute." In the case of new employees, a committee would have the responsibility of determining the physical requirements for all job openings, and give preference to the qualified handicapped.

¹ Jobs for the Handicapped Through Collective Bargaining, American Federation of Labor (Collective Bargaining Series No. 2), Washington, 1947.

Reducible Factors in Housing Costs

LITTLE HAS BEEN DONE to lower existing cost of house construction, according to a statement of the director of the National Housing Administration Technical Office.¹ There has been no progress in lowering building costs such as has taken place in the financing of housing by means of lengthening the term and increasing the percentage of the mortgage loan and by lowering interest rates.

A number of reasons account for the high cost of a house, many of which could be solved by greater use of factory-made housing, the NHA representative stated. For example, more than 30,000 pieces, excluding nails and screws, are joined to construct a dwelling. Weights of houses range from some 90,000 pounds for a small frame cottage without a basement to 260,000 pounds for a 4-room brick house with 8-inch walls and basement.

Over 500 operations are involved in putting a small house together. Skills required are varied and some are needed only for a few hours. Fifteen or more subcontractors may be employed to build a house. Furthermore, structural systems are too complicated. The wall of a frame house may have 12 or 14 layers from the finish coat of outside paint to the finish coat of inside paint.

¹ Source: Tomorrow's Town, New York, National Committee on Housing, Inc., June 1947 (p. 2).

Recent Decisions of Interest to Labor¹

Lea Act Constitutional

Supreme Court Reverses District Court Decision: Reversing a decision by a Federal district court in Illinois,² the United States Supreme Court has upheld the constitutionality of the Lea Act.³ This act makes it unlawful to exercise coercion for the purpose of compelling a broadcast licensee to employ persons in excess of the number needed to perform actual services.

The lower court had held the act to be unconstitutional on four grounds: (1) that it makes peaceful picketing, in order to enforce a request that more employees be hired, unlawful, and thus violates the first amendment (peaceful picketing has been held to be protected by the free speech amendment), (2) that it contains a restriction on the employment of labor, and thus violates the thirteenth amendment which prohibits slavery and involuntary servitude, (3) that the phrase "needed * * * to perform actual services," creates indefiniteness in the definition of a criminal offense, and thus violates the fifth amendment, and (4) that it discriminates, without adequate basis, against employees of broadcasting stations, thus violating the fifth amendment.

The Supreme Court ruled that the particular facts raised in the case at hand did not require a determination of the first and second of these issues, but that the statute on its face was not violative of either the free speech or the involun-

tary servitude provisions of the Constitution. The Court pointed out that the question of whether the application of the act in a case which did raise these issues would violate these provisions would not be passed upon until the issue was appropriately raised.

In rejecting the contention as to the indefiniteness of the crime the Court ruled that the language of the statute "provides an adequate warning as to what conduct falls under its ban, and marks boundaries sufficiently distinct for judges and juries fairly to administer the law in accordance with the will of Congress." Mr. Justice Reed dissented on this point, arguing that there is no sufficient general understanding or agreement on how many men are "needed to perform actual services."

As to the point that the act discriminates against broadcasting employees the Court pointed out that Congress may constitutionally aim its laws directly against coercive employee practices in the broadcasting industry, and not extend the regulation over a wider or narrower area. Said the Court: "It is not within our province to say that because Congress has prohibited some practices within its power to prohibit, it must prohibit all within its power."

Wages and Hours⁴

Slaughterhouse Meat Boner Employees: The United States Supreme Court has recently held⁵ that meat boners, who, under written contract with a slaughterhouse operator, are required to do the boning in the slaughterhouse as independent contractors, and the boners hired by such contractors, are employees of the slaughterhouse operator and not independent contractors within the meaning of the Fair Labor Standards Act.

In so ruling the Supreme Court considered the work as "a part of the integrated unit of production under such circumstances that the workers were employees of the establishment." In particular the Court considered the following factors significant: (1) the workers did "a specialty job on the production line," (2) the responsibility under the various boning contracts did not rest

¹ Prepared in the Office of the Solicitor, U. S. Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

² *U. S. v. Petrillo* (U. S. D. C. N. D. Ill., Dec. 2, 1946). See *Monthly Labor Review*, February 1947 (p. 276).

³ *U. S. v. Petrillo* (U. S. Sup. Ct., June 23, 1947).

⁴ This section is intended merely as a digest of some recent decisions involving the Fair Labor Standards Act and the Portal-to-Portal Act. It is not to be construed and may not be relied upon as an interpretation of these acts by the Administrator of the Wage and Hour Division or any agency of the Department of Labor.

⁵ *Rutherford Food Corp. v. McComb* (U. S. Sup. Ct. June 16, 1947).

upon a particular contractor but "passed from one boner to another," (3) the premises and equipment of the plant owner were used for the work (4) the group of boners had no business organization that could or did shift as a unit from one slaughterhouse to another, (5) the managing salesman of the plant "kept close touch on the boning operation," and (6) "while profits to the boners depended upon the efficiency of their work, it was more like piecework than an enterprise that actually depended for success upon the initiative, judgment or foresight of the typical independent contractor."

Portal-to-Portal Act—Constitutionality: In three recent decisions by various Federal district courts, the Portal-to-Portal Act⁶ has been declared constitutional.⁷ In each of these cases, involving claims filed prior to the enactment of the statute, the courts decided that the statute involves a withdrawal of jurisdiction from the Federal courts to proceed in suits under the Fair Labor Standards Act for portal-to-portal pay, except under specified conditions. The Court in each of the cases ruled that Congress may constitutionally withdraw such jurisdiction, since the Federal district courts and their jurisdiction are within the control of the legislative branch of the Government, and Congress may withdraw the jurisdiction of such courts to proceed with suits based on rights created by national legislation. The court in the *Cochran* case discussed the contention that the act is unconstitutional because it retroactively takes away contractual rights. In rejecting this argument the court stated that the action involved in this suit "is purely a creature of the statute. The power that gave it, according to this holding, has the power to take it away, and that is exactly what Congress did so far as the Portal-to-Portal Act is concerned."

Contract "Overtime": The Circuit Court of Appeals for the Second Circuit has held that payments in accordance with a collective-bargaining agreement of additional compensation for night and week-end work at what the contract called an "overtime" rate must be included in determining the regular rate for the purpose of computing overtime com-

pensation.⁸ This decision reverses the prior holding of the Federal District Court for the Southern District of New York on this question.⁹

The case involved an agreement which provided for a differential between the rate paid for work during certain daytime hours, and that paid for work during certain nighttime and week-end hours. The former was termed a "straight-time" and the latter an "overtime" rate. Employees working in excess of 40 hours a week were paid for such overtime one and one-half times the "straight-time" rate, regardless of whether their work during that week had been performed during "straight-time" or "overtime" hours. The court held that this method of computing overtime was not in conformity with the act, since the regular rate upon which the overtime compensation is based, is an actual fact and cannot be fixed by agreement of the parties.

The court further ruled that the doctrine of the *Belo* case¹⁰ was not applicable to the situation under consideration because a guaranteed weekly wage was not involved. Nor did the court consider objectionable the fact that the use of an average rate would require separate computations for each week at rates which may vary from week to week. The court stated that "the statutory element of regularity is met where a single principle or rule is uniformly applied in order to obtain the rate" even though the regular rate may vary with the number of hours worked.

Wage Rate Manipulation: In a recent case decided by the Circuit Court of Appeals for the Ninth Circuit¹¹ an arrangement was made whereby the hourly wage rate was reduced so that on a 40-hour week, with 4 hours' overtime at time and a half, the employee received the same amount as that previously received for 44 hours without overtime. The agreement in question also provided for time and a half for all hours in excess of 8 in any one day, and the new hourly rate was above the statutory minimum.

The court held that this contract was not in violation of the Fair Labor Standards Act, pointing out that "the act does not prohibit an agreement whereby the employees continue to receive

⁶ See p. 199 of this issue for a summary of this statute.

⁷ *Burfeind v. Eagle-Picher Co.* (U. S. D. C. N. D. Tex., May 21, 1947), *Cochran v. St. Paul and Tacoma Lumber Co.* (U. S. D. C. N. D. Wash., May 26, 1947), *Boehle v. Electro Metallurgical Co.* (U. S. D. C. D. Oreg., June 9, 1947).

⁸ *Aaron v. Bay Ridge Operating Co.* (U. S. C. C. A. (2d) June 3, 1947).

⁹ *Addison v. Huron Stevedoring Corp.* (U. S. D. C. S. D. N. Y., Jan. 6, 1947). See Monthly Labor Review, March 1947 (p. 486).

¹⁰ See Monthly Labor Review, June 1947 (p. 1059), for a discussion of this doctrine as recently reaffirmed by the Supreme Court.

¹¹ *Lassiter v. Atkinson Co.* (U. S. C. C. A. (9th), May 28, 1947).

the same wages as before, provided the rate of pay equals or exceeds the required minimum."

Interstate Commerce Act Exemption: Two recent decisions of Federal circuit courts involved the application of section 13 (b) (2) of the Fair Labor Standards Act, exempting from the overtime provisions any employee of an employer subject to provisions of Part I of the Interstate Commerce Act. Both cases involved subsidiaries of railroads.

The first of these cases¹² involved the employees of a carrier by water, owned by a railroad. The court ruled that the carrier fell within the provisions of the Interstate Commerce Act which state that if permission is granted to a railroad to own, lease, operate, or have an interest in a carrier, that carrier is subject to the Interstate Commerce Act. As such it was held that the carrier's employees are exempt from the overtime provisions of the Fair Labor Standards Act.

The second case¹³ concerned the joint employees of a railroad and a radio communications company which is a wholly owned subsidiary of the railroad, operated almost exclusively for the benefit of the railroad. The court in this case held that the employees in question were not exempted from the overtime provisions. The court relied upon the fact that while the work of the radio corporation principally benefited the railroad, it was in fact performed by a legally separate non-exempt corporation. The court considered the result reached analogous to decisions which have held that when an exempt employer engages in activities different from those exempted under the statute, the employees in the nonexempt department of his business are subject to the act.

Labor Relations ¹⁴

Refusal to Bargain—Doubt of Union Majority: It has recently been held,¹⁵ in line with several earlier decisions, that once a union is certified as collective-bargaining representative the presumption is that its majority status continues until a contrary status is shown. On this ground, the court, in this case, ruled that an employer's refusal to bar-

gain with a certified union on the ground that he doubted the union's majority status still existed was a violation of the National Labor Relations Act. The court noted that the refusal to bargain continued until complaint was filed by the union, and that there was nothing to show that in the meantime the union did not represent a majority of the employees.

Company Domination: In a case decided by the Circuit Court of Appeals for the Sixth Circuit,¹⁶ an officer of a disestablished union and the attorney for that union actively participated in the organization of a new independent union in another plant of the employer who had been ordered to disestablish the former union. The court ruled that this was not evidence of the fact that the new union was company-dominated, since it was further shown that these persons were acting in their own interest and not that of the employer, and the company was not aware of the new organizing activities. The court likewise rejected as evidence of company domination a showing that the company immediately granted an exclusive-bargaining contract to the new union. The court refused to consider this immediate recognition "premature" since the company was required to bargain with the union as soon as it discovered that it represented a majority. The court pointed out that "the statute does not provide that the bargaining process between employer and employee must be delayed until an election is ordered by the Board. The right to representation exists prior to the holding of an election and must be recognized whenever it is found that an organization represents a majority of the employees."

Veterans' Reemployment

Union Official "Top Seniority": Four recent decisions¹⁷ by the Circuit Court of Appeals for the Third Circuit have reversed a group of cases decided by the Federal district court in New Jersey¹⁸ on the effect of collective-bargaining agreements entered into during the veteran's absence in the service, which changed seniority rules by providing "top seniority" for union officials.

¹² *Magnussen v. Ocean Steamship Co. of Savannah* (U. S. C. C. A. (2d), June 13, 1947).

¹³ *Wabash Radio Corp. v. Walling* (U. S. C. C. A. (6th), June 9, 1947).

¹⁴ Decisions reported under this section involve the National Labor Relations Act prior to the effective date of its amendment by Public Law 101, the Labor Management Relations Act of 1947.

¹⁵ *N. L. R. B. v. Harris-Woodson Co.* (U. S. C. C. A. (4th), May 31, 1947).

¹⁶ *N. L. R. B. v. Thompson Products, Inc.* (U. S. C. C. A. (6th), June 5, 1947).

¹⁷ *Gauweiler v. Elastic Stop Nut Corp.*, *Koury v. Elastic Stop Nut Corp.*, *DiMaggio v. Elastic Stop Nut Corp.*, *Payne v. Wright Aeronautical Corp.* (U. S. C. C. A. (3d), May 20, 1947).

¹⁸ See Monthly Labor Review, February 1947 (p. 275).

The facts involved covered not only reinstatement of veterans but also demotions after reinstatement and lay-offs. The lower courts had held the intervening union agreements inoperative to change the relative seniority position of veterans. The circuit court of appeals, however, decided that an intervening agreement, unless discriminatory as to the veteran, could change his seniority status. The court argued that since veterans are not entitled to superseniority (*Fishgold v. Sullivan Dry Dock & Repair Corp.*, 66 Sup. Ct. 1105) but only to such status as they would have if they had remained on the job or had been on furlough, and since under such circumstances their seniority rights would have been fixed by the collective bargaining agreements currently in effect, therefore the intervening agreement did not violate the veterans' statutory rights. The court found that the provision in question represented a reasonable effort by the union to assure the presence of union officials to protect the rights of union members, as long as any union members were employed, and concluded that its effect was nondiscriminatory.

In addition, the court pointed out that a contrary holding would create conflicting systems of seniority rights for veterans and nonveterans, an industrial impossibility which Congress did not intend. It further indicated that a veteran certainly had no claim upon a job held by a union official when there were on the seniority list nonveterans or veterans of greater seniority than the veteran.

An application of the question of discrimination was made in the *Payne* case in which the intervening contract provided, in a plant where seniority was on an occupational basis, that occupational credit should be given only to an employee who had spent six months in the occupation. As to this clause, the circuit court of appeals intimated that it would be discriminatory and inoperative as to a veteran who entered the service after spending less than six months in an occupation, since it could be presumed that if he had not entered the service he would have continued in the occupation. However, as to a veteran who claimed seniority in an occupation in which he had worked less than six months, having left it for some reason other than his entry into the service, the clause would be nondiscriminatory and applicable.

In dissenting opinions in three of the cases,

Judge McLaughlin stressed the fact that "we are dealing with the 'extraordinary statutory security' given the veteran for the preservation of his seniority," and that "there is nothing in the act permitting that seniority to be reduced by any sort of changed circumstances within the statutory year."

Lay-off Not a Discharge: A Federal district court in Missouri recently held¹⁹ that lay-off of a reinstated veteran within the 1-year statutory period because of a necessary reduction in force, when the employer acknowledges its obligation to reemploy the veteran in accordance with his seniority status if and when the job is reinstated, is not a violation of section 8 (c) of the Selective Training and Service Act, which prohibits discharges without cause.

Change in Circumstance: A veteran, in a recent decision,²⁰ had, prior to his entry into the service, been employed by the defendant company as chief company physician. During his service in the armed forces, the company which had changed owners made a bona fide change in its arrangements so that most of the functions formerly performed by the veteran and his staff were assumed by an insurance carrier. The company refused to reinstate the veteran upon his discharge from the service.

Upon these facts the court ruled that the company's circumstances has so changed as to render it impossible or unreasonable to reemploy the veteran. The court pointed out that there was in fact "no need for this particular type of physician in this company, and the act under all of the circumstances of this case does not require it to be set up again for the benefit of this ex-service man."

Judge O'Connell dissented, relying in the main on a finding of fact that certain of the functions formerly performed by the veteran are still performed by employees of the company, although others are performed by the insurance carrier. He argued that the veteran's request was merely that those functions still performed in the company be consolidated to form what is substantially his old job. He stated that to reject this request "is tantamount to asserting that whenever an employer has split a job among other employees * * *

¹⁹ *Maloney v. C. B. & Q. R. R. Co.* (U. S. D. C. Mo., May 19, 1947).

²⁰ *Featherston v. Jersey Central Power & Light Co.* (U. S. C. C. A. (3d), May 19, 1947).

the statutory provision requiring restoration of the returning serviceman would not be applicable."

State Court Decisions

Colorado Labor Peace Act: The Colorado Supreme Court has upheld the constitutionality of the Colorado Labor Peace Act.²¹ This statute prevents the State courts from issuing injunctions against strikes, peaceful picketing, and several other labor activities in cases growing out of labor disputes. A "labor dispute," however, is limited to one between disputants who stand in the proximate relation of employer and employee. The case in question involved a dispute between a union seeking to organize milk-delivery drivers and dairy employees and a dairy operator whose employees were all nonunion. In the course of the dispute the union picketed the dairy and its drivers and instituted a secondary boycott against the dairy's customers.

The court ruled that the dispute did not fall within the definition of "labor dispute" under the act, and an injunction against the union's activities was not therefore in violation of the statute. The court rejected the contention that the act is unconstitutional because it permits restraints on peaceful picketing in a labor dispute in which the disputants do not stand in the proximate relationship of employer and employee. In the view of the court, while peaceful picketing is protected by the Constitution as an exercise of free speech, a State may subject the right of peaceful picketing to a reasonable exercise of the State's police power for the protection of the public welfare. This the State had done, said the court, in limiting the immunity against injunctions to cases involving an employer-employee relationship.

Ohio—Picketing; Secondary Boycott: A lower Ohio court recently issued an injunction against picketing in connection with a secondary boycott.²² Reasoning along lines similar to those set forth in the Colorado case noted above, the court pointed out that "recognition of peaceful picketing as an exercise of free speech does not imply that the States must be without power to confine the sphere of communication to that directly related

to the dispute." The court concluded that the use of picketing against a "stranger to the dispute" in order to compel him to bring pressure against the disputing employer is unlawful as against public policy. In addition, the court held that an agreement between a union and a third party whereby the latter agrees to cease dealing with a disputing employer, and a secondary boycott to compel such an agreement, are both in violation of the Ohio Anti-Trust Law.

Tennessee—Enticement Statute: A Tennessee statute makes it unlawful to "knowingly hire, contract with, decoy, or entice away, directly or indirectly, any one, who is at the time under contract or in the employ of another." In affirming a lower court decision the Tennessee Court of Appeals recently held²³ that in an action under this statute, and after a showing that an employee breached his employment contract, the burden is on the subsequent employer to show that the employee had good cause for breaching the contract. In the absence of such a showing, the court ruled, a jury is justified in finding that the subsequent employer has violated the statute.

Wisconsin—Employment Peace Act: The Wisconsin Supreme Court has reversed²⁴ a lower court decision²⁵ on the question of whether walk-outs of employees during working hours for the purpose of holding a union meeting, followed by the return of the employees to work on the next day, constitutes a strike within the meaning of the Wisconsin Employment Peace Act. That act provides that it is an unlawful labor practice for an employee individually or in concert with others "to engage in any concerted effort to interfere with production except by leaving the premises in an orderly manner for the purpose of going on strike."

The lower court had held that the intermittent work stoppages constituted a "strike," and were hence not unlawful. In reversing this decision the State supreme court ruled that to constitute a strike there must be a continuance of unemployment until the objectives of the strike have been achieved or the strike abandoned. This was lacking in the case in question.

²¹ *Denver Milk Producers, Inc. v. International Brotherhood of Teamsters* (Colo. Sup. Ct., May 19, 1947).

²² *Ridge Mfg. Co. v. United Electrical Radio & Machine Workers* (Ohio Ct. of Com. Pl., May 12, 1947).

²³ *Stewart v. Price* (Tenn. Ct. of App., May 30, 1947).

²⁴ *United Automobile Workers, Local 232 v. Wisconsin Employment Relations Board* (Wis. Sup. Ct., June 10, 1947).

²⁵ See Monthly Labor Review, January 1947 (p. 88).

Chronology Of Labor Events, April-June 1947

April 3

THE Coal Mines Administrator ordered that 518 bituminous-coal mines should be closed indefinitely, thus continuing in these particular mines, after termination of the 6-day period set, the shut-down which began at midnight on March 31 as a memorial to the 111 mine workers killed at No. 5 Mine of the Centralia Coal Co. on March 26 (see Chron. item for March 26, 1947, MLR, May 1947). The 518 mines were to remain closed until safety conditions and practices had been reviewed and mines were certified to be not unduly hazardous. (Source: Telegram of Coal Mines Administrator, Apr. 3, 1947).

On April 5, the president of the United Mine Workers of America (AFL) advised the Deputy Coal Mines Administrator that since the United States Inspection Service had found only two mines in the Nation had met the full requirements of the Safety Code he officially requested on behalf of the UMWA the closing of all other bituminous-coal mines.

On the same date, the Deputy Coal Mines Administrator rejected the proposal. He stated that, after careful consideration, he was unable to agree that he "should follow the arbitrary procedure of closing down the entire soft-coal industry when the Krug-Lewis agreement itself provides a means by which the union may guard against working in unsafe mines." (Source: United Mine Workers Journal, Apr. 15, 1947, p. 22; see also Chron. item for May 29, 1946, and discussion on p. 172, MLR, Aug. 1946.)

On April 10, the Judge of the District Court of the United States for the District of Columbia, who had issued an injunction against the UMWA and its president and had charged them with contempt of court (see Chron. item for Oct. 21, 1946, MLR, Feb. 1947) held a hearing on a motion to return \$2,800,000 of the \$3,500,000 fine levied on the UMWA, as provided by the United States Supreme Court (see Chron. item for Jan. 14, 1947, MLR, May 1947). The judge questioned the good faith of the UMWA in the shut-down of the mines, which was still in effect. He stated that he thought any action on the refund should be postponed until July 1, the day after the expiration of Federal powers to operate the seized mines. How-

ever, he deferred to the Government request for a 2-week delay. (Source: United Mine Workers Journal, Apr. 15, 1947, p. 3.)

On April 12, the president of the UMWA authorized the president of each district of the union "to grant permission for the immediate resumption of production at each mine now closed where there is reasonable ground to believe from the information available to him that the mines have been placed in a safe condition." (Source: Daily press.)

On April 24, the United States District Court Judge returned to the UMWA \$2,800,000 of the \$3,500,000 fine originally levied. Court costs of \$35,000 were paid by the union. (Source: United Mine Workers Journal, May 1, 1947, p. 4.)

On June 23, shortly after the Labor Management Relations Act of 1947 (the Taft-Hartley Act) became law (see Chron. item for June 20, this issue), a walk-out of mine labor started.

On June 28, the 10-day vacation began as provided by the terms of the Krug-Lewis agreement; (see Chron. item for May 29, 1946, MLR, Aug. 1946).

On June 30, Federal Government operation of the mines ceased (in accordance with the lapse of Federal seizure power). Such operation had started more than 13 months earlier, under the terms of the War Labor Disputes Act (see MLR, Aug. 1943, p. 305; Chron. items for May 29, 1946, MLR, Aug. 1946, and Dec. 31, 1946, MLR, Feb. 1947). (Source: BLS records.)

April 7

THE Supreme Court, in the cases of *Bethlehem Steel Co. et al. v. New York State Labor Relations Board*; *Allegheny Ludlum Steel Corp. v. Kelley et al.*, decided that State agencies may not act "until the Federal Board has acted in the same case." The Supreme Court explained that if (1) the National Labor Relations Board "has jurisdiction over the industry in which these particular employers are engaged" and (2) has asserted control of their labor relations in general, then "we do not believe this leaves room for the operation of the State authority asserted." (Source: Labor Relations Reporter, 19 LRRM, p. 2499.)

ABOUT 340,000 workers, represented by the National Federation of Telephone Workers (independent), went on strike in the American Telephone & Telegraph Co. system. (For discussion, see MLR, May 1947, p. 836, and June 1947, p. 1071.) The union's 10 demands included a \$12 weekly wage increase.

On April 15, the Secretary of Labor stated that the union had asked the ATT to bargain for all of its member companies on a national scale and that the ATT had refused, but had offered to arbitrate the question of wages locally, company by company. The Secretary stated further that both parties had rejected his proposals for settlement; the union's rejection was based on a demand for a substantial wage offer prior to arbitration; the ATT demanded 10 regional boards in place of a single national

board. (Source: U. S. Dept. of Labor release, Apr. 15, 1947.)

On April 25, the Chesapeake and Potomac Telephone Co. of Baltimore, Md., and the Maryland Federation of Telephone Workers, Inc., reached a settlement. The agreement marked the first break in the 19-day work stoppage. A 1-year contract was signed, and it was agreed to arbitrate disputed issues locally, including basic wage rates. (Source: Chesapeake and Potomac Telephone Co. of Baltimore City release, Apr. 25, 1947.)

On May 6, the policy committee of the NFTW released individual unions from the pledge to obtain approval of that committee to settlements, and a number of agreements soon followed. (Source: Labor Relations Reporter, 20 LRR, p. 48.)

On May 8, the members voted to end the 32-day strike of long-distance telephone workers. The wage increase provided for was \$4.40 a week. (Source: Daily press.)

On May 20, the Association of Communication Equipment Workers, an NFTW affiliate representing an estimated 20,000 members in 42 States concluded with the Western Electric Co. a 2-year contract providing an 11½-cent hourly wage increase—the equivalent of about \$4.40 a week. (Source: BLS records.)

On June 9, the Communication Workers of America, the independent union of telephone employees which replaced the NFTW, convened a meeting. The CWA decided to build up its own organization before doing anything about the matter of going into the AFL or CIO or the combined organization that may emerge from the unity talks between the two organizations (see Chron. item for May 1, this issue). (Source: BLS records.)

April 9

THE Temporary Controls Administrator amended the rent regulation for transient hotels, residential hotels, rooming houses, and motor courts (see Chron. item for Jan. 8, 1947, MLR, May 1947), thereby extending decontrol of rents to tourist homes, to an increased number of permanent hotel rooms, and to transient rates in many small hotels not previously covered. (Source: Federal Register, Vol. 12, p. 2358, and daily press.)

On June 30, the President approved the Housing and Rent Act of 1947, whereby modified rent control was extended for 8 months. Under the terms of the law, landlord and tenant may mutually agree to a rent increase of up to 15 percent if a lease is signed on or before December 31, 1947, for a period ending on or after December 31, 1948. Rents for accommodations in establishments commonly accepted as hotels, motor courts, and tourist homes serving transient guests exclusively were decontrolled. (Source: Public Law 129, 80th Cong. 1st sess.)

THE United States Employment Service and the Veterans Employment Service prepared to carry out the functions and responsibilities formerly vested in the Selective Service System (see Chron. item for Mar. 31, 1947, MLR, May 1947) for assisting veterans of World War II in securing

restoration or reinstatement in their former jobs. (Source: U. S. Dept. of Labor release, Apr. 9, 1947.)

On May 23, the United States Department of Labor announced that the Secretary of Labor had signed an order establishing the Veterans' Reemployment Rights Division in the Department of Labor. (Source: U. S. Dept. of Labor release, May 23, 1947.)

On June 12, the Secretary of Labor announced that Commissioners of Conciliation and field representatives of the Apprentice Training Service would be assigned temporarily to handle cases from veterans concerning their reemployment rights under the Selective Service Act, pending the establishment of a permanent staff for this purpose. (Source: U. S. Dept. of Labor release, June 12, 1947.)

April 14

THE Supreme Court, in the case of *Trailmobile Co. and International Union, United Automobile, Aircraft, and Agricultural Workers of America (UAW-CIO) Local No. 392 v. Lawrence Whirls*, decided that veteran's restored seniority under the reemployment provisions of the Selective Training and Service Act ends with completion of the first year of his reemployment and does not last as long as employment continues. In this case, as in *Fishgold v. Sullivan Drydock and Repair Corp.* (see Chron. item for May 27, 1946, MLR, Aug. 1946), the problem of the seniority standing of a reemployed veteran was raised. In the *Fishgold* case, the court held that under the act a veteran is entitled to be restored to his former position plus seniority which would have accumulated if he had not been inducted into the armed forces. (Source: U. S. Law Week, 15 LW p. 4435; for discussion, see MLR, June 1947, p. 1063.)

April 20

THE United States Steel Corp. and the United Steelworkers of America (CIO) announced that agreement had been reached on a pay increase of "slightly in excess of 15 cents an hour," thereby establishing what was expected to be a "pattern" for 1947. The contract was made for a period of 2 years; it may be reopened at the end of 1 year on wage issues. Wage increases were made retroactive to April 1. The annual pay increase for 140,000 United States Steel Corp. workers was estimated at more than 42 million dollars, the CIO stated. (Source: CIO News, Apr. 28, 1947, p. 3, and daily press; for discussion, see MLR, May 1947, p. 835.)

On May 21, the president of the CIO told members of the United Steelworkers that "under no circumstances" must there be any strikes for the duration of their contracts in the steel industry. (Source: CIO News, Paper Workers Edition, June 9, 1947, p. 2.)

April 22

THE Toledo, Peoria, and Western Railroad and 13 unions of railroad workers signed an agreement ending a work stoppage that started in October 1945. Under the

terms of the settlement all employees were to return to work with full seniority rights in accordance with their standing on the roster when Government control of the railroad ended on October 1, 1945. (Source: Labor, Apr. 26, 1947, p. 1; for discussion see MLR, May 1947, p. 836.)

April 23

THE President, by Executive Order No. 9841, provided for termination of the Office of Temporary Controls, which was established by Executive Order No. 9809 (see Chron. item for Dec. 12, 1946, MLR, Feb. 1947). This termination is in conformity with the terms of the Urgent Deficiency Appropriation Act approved on March 22, 1947, which declared that it was the intention of Congress that OTC should be closed and liquidated by June 30, 1947 (see Chron. item for Feb. 3, 1947, MLR, May 1947). Functions of the Temporary Controls Administrator with respect to rent control were ordered to be transferred to the Housing Expediter, and those with respect to price control over rice were transferred to the Secretary of Agriculture, effective on May 4, 1947. Certain other functions were to be transferred to the Secretary of Commerce on the same date and also on June 1, 1947. (Source: Federal Register, Vol. 12, p. 2645).

April 28

THE thirty-fifth annual meeting of the Chamber of Commerce of the United States convened in Washington, D. C. (Source: Business Action, May 9, 1947.)

May 1

THE President submitted to Congress, Reorganization Plan No. 2, which was designed to provide for permanent transfer of the United States Employment Service to the Department of Labor and for other organizational changes in labor functions. (Source: White House release, May 1, 1947.) The Employment Service was created in the Department of Labor by Act of Congress of June 6, 1933; transferred to the Federal Security Agency by Reorganization Plan No. 1 of July 1939; transferred to the War Manpower Commission by Executive order in September 1942; and returned to the Department of Labor by Executive order of September 19, 1945. (Source: U. S. Department of Labor release, June 16, 1947, p. 4.)

On June 10, the House of Representatives rejected the reorganization plan. (Source: Congressional Record, June 10, 1947, p. 6885.)

On June 30 the Senate rejected the plan. (Source: Congressional Record, June 30, 1947, p. 8035.)

THE Unity Committees of the CIO and AFL met and issued a joint statement that it was the unanimous opinion of the representatives that organic unity should be established within the labor movement in the United States (see Chron. item for Jan. 31, 1947, MLR, May 1947), that details incidental to the formation and establishment of a strong united labor movement would be dealt with, and that, meantime, efforts would be con-

tinued to prevent enactment of "antilabor" legislation. (Source: CIO News, May 5, 1947, p. 5.)

At this meeting, on the unity issue, the first in 5 years, the chief differences were that the AFL wanted "immediate amalgamation with discussion of jurisdictional and political, etc., questions to be a matter for delegates to the convention of the united labor movement"; the CIO wanted the policies in regard to these issues settled upon in advance of the merger. (Source: United Mine Workers Journal, May 15, 1947, p. 5.)

May 7

THE President appointed a panel of 11 persons, to be available to serve as members of a special board if the Secretary of Labor should find it necessary to call upon them, in accordance with a provision of Executive Order No. 9809 (see Chron. item for Dec. 12, 1946, MLR, Feb. 1947). This order specified that the functions of Section 5 of the War Labor Disputes Act, relating to wages or other terms and conditions of employment in plants or mines in possession of the Government, were to be administered by a special board to be constituted, when necessary, by the Secretary of Labor, from among members of a panel to be appointed by the President. (Source: White House release, May 7, 1947.)

May 19

THE Connecticut Fair Employment Practices Act was approved. (Source: Labor Relations Reporter, 20 LRRM, p. 3055; for discussion, see p. 198, this issue.)

June 7

THE Secretary of Labor and the Administrator of the Wage and Hour and Public Contracts Divisions withdrew all orders and enforcement policies under which enforcement of the Fair Labor Standards Act and the Public Contracts Act was stayed for any of a variety of reasons. This action was taken pending review of the full implications of the Portal-to-Portal Pay Act of 1947. In this way, employees and employers are assured that their future rights and liabilities under the two acts will not be limited by enforcement policies adopted prior to enactment of the Portal-to-Portal legislation. (Source: U. S. Dept. of Labor, Wage and Hour and Public Contracts Division, release, PR-104, June 17, 1947.)

On May 14, the President approved the Portal-to-Portal Act of 1947, the purpose of which "is to relieve employers and the Government from potential liability for billions of dollars in so-called 'portal-to-portal' claims." The law does not affect the liability for such payment if the claims arise from contractual obligations or plant practice or custom consistent with an effective contract. (Source: Public Law 49, 80th Cong., 1st sess., and White House release, May 14, 1947; for discussion, see p. 199, this issue.)

On February 8, the judge of the United States District Court for Eastern Michigan, dismissed the claim for overtime compensation and penalties because the walking

and preliminary activities involved less than ten minutes per day for each employee. This case was remanded to the District Court by the Supreme Court of the United States (see Chron. item for June 10, 1946, MLR, Aug. 1946) after the Supreme Court had ruled that time necessarily spent by employees in walking to work on employer's premises, following punching of time clocks, was working time within the scope of overtime-pay provisions of the Fair Labor Standards Act. The judge of the District Court held that even if the "de minimus" conclusion was not warranted, employers who abided by the Wage and Hour Administrator's rulings were not to be held liable retroactively. (Source: U. S. Law Week 15 LW pp. 1121 and 2445; for discussion, see MLR, Mar. 1947, p. 483.)

On April 14, the Supreme Court dismissed the case of *Anderson v. Mt. Clemens Pottery Co.* regarding "portal-to-portal" pay, at the request of the United States Department of Justice. (Source: Daily press.)

On April 8, the Sixth United States Circuit Court of Appeals at Cincinnati dismissed the appeal in this case at the request of the attorneys of the employer and employees. In dismissing the case, renewal of appeal was barred. (Source: Labor Relations Reporter, 19 LRR, p. 3.)

June 11

THE Secretary of Agriculture announced that sugar rationing to household consumers and institutional users (hotels, restaurants, etc.) would be discontinued the following day. This action did not affect price controls on sugar and related products (see Chron. item for Mar. 31, 1947, MLR, May 1947). Rationing to industrial users of sugar, he stated, would continue as before. (Source: U. S. Department of Agriculture release, 1319-47.)

June 16

THE Supreme Court, in the case of *Rutherford Food Corp. et al. v. McComb, etc.*, decided that meat boners in a slaughterhouse who had a written contract with the operator providing that they should be paid a stipulated sum as independent contractors, were nevertheless "employees" of the slaughterhouse owner within the meaning of the Fair Labor Standards Act of 1938. As such, the employees were entitled to overtime compensation as required by the Act. (Source: Labor Relations Reporter, BNA Advance Bulletin, June 16, 1947.)

THE CIO maritime unions went on strike for the third time in a year. This stoppage was precipitated by the expiration of contracts between CIO maritime unions and shipowners on the previous day, (see Chron. items for Aug. 24, 1946, MLR, Nov. 1946, and for Oct. 1, 1946, MLR, Feb. 1947.)

On June 19, a settlement was reached on the East and Gulf Coasts whereby a 5-percent wage increase and 9 paid holidays were provided for maritime workers represented by the National Maritime Union (CIO), the American Communications Association, (CIO) and the Marine Engineers Beneficial Association (CIO). On the same date, an interim agreement was signed on the West

Coast between the National Union of Marine Cooks and Stewards (CIO) and the American Communications Association (CIO) and the operators. (Source: CIO News, June 23, 1947, p. 7, and daily press.)

On June 21, the West Coast agreement, whereby a 5-cent wage increase and 9-paid holidays were granted, was made final and also applied to the Marine Engineers Beneficial Association (CIO) and the Pacific Coast Marine Firemen, Oilers, Watertenders and Wipers Association (independent). (Source: Daily Press, for discussion, see MLR, July 1947, p. 71.)

June 18

THE National Planning Association undertook a survey to find "the causes of industrial peace." (Source: Daily press.)

June 19

The 30th session of the International Labor Conference opened in Geneva. (Source: Daily press)

June 20

THE President vetoed the Taft-Hartley labor bill. (Source: White House release, June 20, 1947.) The House of Representatives on the same day, voted 331 to 83 to pass the bill over the veto.

On June 23, the Senate overrode the President's veto by a vote of 68 to 25, and the Labor Management Relations Act of 1947 thus became law. (Source: Public Law 101, 80th Cong., 1st sess., and daily press; for discussion, see MLR, July 1947, p. 57.)

On June 26, the President stated, "I have expressed my objections to this legislation and my concern as to its effects. It has become law * * * I shall see that this law is well and faithfully administered." (Source: White House release, June 26, 1947.)

June 23

THE Supreme Court, in the case of *United States v. Petrillo*, upheld the Lea "Anti-Petrillo" Act of 1946 (see Chron. item for Apr. 16, 1946, MLR, Aug. 1946). The amendment of the Communications Act of 1934 to make it unlawful to compel a licensee "to employ * * * in connection with the conduct of the broadcasting business of such licensee any * * * persons in excess of the number of employees needed by such licensee to perform actual services," was stated not to be unconstitutional. (Source: Labor Relations Reporter, BNA Advance Bulletin, June 23, 1947.)

June 27

THE Ford Motor Co. and the United Automobile Workers (CIO) agreed to the establishment of a pension system for production workers. (Specific details of the program remained to be worked out.) Under the same agreement wages were increased by 7 cents an hour. (Source: Daily press.)

Publications of Labor Interest

The challenge of industrial relations: Trade unions, management, and the public interest. By Sumner H. Slichter. Ithaca, N. Y., Cornell University Press, 1947. 196 pp. \$2.50.

This book, the outgrowth of a series of lectures at Cornell University, discusses the basic problems created by the growth of the labor movement as they affect management and the community, the aim being to "focus attention upon the problems created by unions and upon the tremendous contributions which unions can make to national prosperity and industrial democracy." Issues analyzed include the relation of trade-unions to the standard of living, their effect on industrial management, contributions they have made to society, role of the community in developing their constructive possibilities, democracy in unions, and the problem of controlling their power.

The author is of the opinion that collective bargaining has produced a better adjustment between the interests of consumers, as represented by management, and the interests of employees, and that it has stimulated improvements in administration. However, "better communication between employees and management and better understanding of each other's problems" are still necessary, he holds. He believes that union wage policies "cannot be counted upon to give proper representation to the interest of the community in the highest possible standard of living and in the fair distribution of income." He sees the need for a set of standards for the improvement of trade-union administration, but would limit government action to protecting "dissenters within unions" and preventing men from "being disciplined or expelled because of their views on problems of union policy."

In dealing with the problem of industrial peace, Professor Slichter lists 11 steps which the parties themselves can take to improve the process of collective bargaining. He suggests that the government be given emergency powers to protect the public interest in industries which supply essential commodities or services. To make unions more effective instruments for advancing the general welfare, there should be wider knowledge of the economics of wages and of the possibilities and limitations of collective bargaining. Despite the problems created,

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

he concludes that "if the potentialities for good in the trade-union movement can be realized, * * * America will build a civilization which surpasses all others in the capacity of the people to work together effectively in the pursuit of common aims."

The industrial study of economic progress. By Hiram S. Davis. Philadelphia, University of Pennsylvania Press, 1947. 187 pp., bibliography. (Research study No. XXXIII.) \$2.75.

The director of the Industrial Research Department, Wharton School of Finance and Commerce, University of Pennsylvania, discusses in this book the concepts, problems, and methods involved in his department's studies of industrial progress. He begins by raising the important question as to whether the current desires for economic progress and for economic security are compatible or competing objectives in modern society. He concludes that additional study of the conditions affecting economic progress is required. The present stock of knowledge in this field is reviewed, and a program of research for extending this knowledge is discussed.

Three strategic factors central to economic progress are identified: (1) increasing productive efficiency in the sense of greater output for a given input of resources; (2) sufficient reemployment of any resources saved by increased efficiency to expand total output; and (3) such distribution of the gains from increased efficiency as will permit and encourage a further rise in production and consumption.

In assessing productive efficiency, the use of both separate and combined input ratios to output is suggested. The many problems involved in measuring the use of labor, materials, capital, power, and other input items are examined, and the problem of defining output is also discussed. The importance of studying the factors which may affect efficiency is emphasized. Among such factors, the author distinguishes technological changes, scale of the market, age of plant and industry, size of operation, method of organization, use of capital and labor, and managerial enterprise. Attention is also given to the reemployment of resources released by gains in productive efficiency.

The conceptual problems involved in studying the distribution of benefits accruing from increased efficiency are discussed. This leads to an examination of the social costs, such as job or income uncertainty, impairment of health, automatization of the individual, and wasteful use of natural resources, which may follow in the wake of industrial development.

A discussion of criteria which may be used in the selection of representative industries for study is appended to the volume. Copious references throughout the text and a generous bibliography will assist the reader in pursuing further many of the important and provocative questions raised by the book.

Child Labor

The employment certificate as an aid in vocational guidance. By Miriam Fuhrman. (In *Occupations, the Vocational Guidance Magazine*, New York, March 1947, pp. 317-320; also reprinted.)

Report of the 1946 inspection of tobacco fields by the Connecticut Department of Labor. Hartford, Department of Labor, 1946. 15 pp.; mimeographed.

The report is concerned mainly with conditions of employment of children. In the total labor force of 9,353 there were 2,870 children between 14 and 16 years of age, of whom a considerable number were migrants. Recommendations for improvement of working conditions of children are given.

Safeguard boys and girls from industrial hazards. Washington, U. S. Department of Labor, Division of Labor Standards, Child Labor and Youth Employment Branch, 1947. Folder. (Child-labor series No. 10.) Free.

Cooperative Movement

La legislación cooperativa en America. By Fernando Chaves Núñez. Washington, Pan American Union, 1947. 110 pp.; mimeographed. 50 cents.

Contains the text (in Spanish) of the cooperative laws and decrees of 16 Latin American countries, as well as, for the United States, the Federal Credit Union Act, the Capper-Volstead law, and the Consumers' Cooperative Act of the District of Columbia.

Frozen food locker plants—location, capacity, rates, and use, January 1, 1946. By L. B. Mann and Paul C. Wilkins. Washington, U. S. Department of Agriculture, Farm Credit Administration, Cooperative Research and Service Division, 1947. 41 pp., map, charts; processed. (Miscellaneous report No. 105.)

Based on reports for 2,861 cold-storage locker plants of which 366 were cooperatively owned; no separate presentation of the cooperatives was given in most cases. Seventy-three percent of all the patrons of the plants reporting were farmers.

Nonprofit housing projects in the United States. Washington, U. S. Bureau of Labor Statistics, 1947. 91 pp., bibliography, diagrams. (Bull. No. 896.) 25 cents, Superintendent of Documents, Washington.

Employment

The population of Philadelphia and environs and labor force and employment estimates—a projection for 1950. Philadelphia, City Planning Commission, 1946. Various pages, charts; processed.

Salt Lake County occupational employment in industries subject to unemployment insurance, September 1946. By Salt Lake Chamber of Commerce and Utah Department of Employment Security. Salt Lake City, Industrial Commission of Utah, Department of Employment Security, 1947. Various pages, charts; processed.

An appended supplement gives State data to March 1947.

Total number of nurses employed for public health work in the United States, in the Territories of Hawaii and Alaska, and in Puerto Rico and the Virgin Islands on January

first of the years 1943 to 1947. Washington, Federal Security Agency, Public Health Service, [1947]. 14 pp.; processed.

In addition to the data on employment, the tabulation shows, by State, the educational qualifications of nurses employed by the different types of agencies.

Manpower trends in Great Britain, 1946-51. (In Ministry of Labor Gazette, London, May 1947, pp. 142, 143. 6d. net, H. M. Stationery Office, London.)

Reinstatement in civil employment. By F. N. Ball. Essex, Thames Bank Publishing Co., Ltd., 1946. 114 pp. 5s. net.

Summary and analysis of the Reinstatement in Civil Employment Act, 1944, of Great Britain, regulations made under the act, and reported decisions of the umpire, with the complete text of the act and procedure regulations.

Family Allowances

The family allowance procedure. By Hubert Curtis Callaghan. Washington, Catholic University of America, 1947. 262 pp., bibliography. (Studies in sociology, Vol. 23.) \$2.75.

Comprehensive presentation of the development, procedures, and characteristics of family-allowance systems in selected countries, with comparison and evaluation of experience. Attitudes toward such programs in the individual countries studied, as well as underlying philosophies, are stressed.

One year of dependents' allowances in Connecticut. By David Pinsky. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, April 1947, pp. 18-21. 15 cents, Superintendent of Documents, Washington.)

The District of Columbia and four States, including Connecticut, have established allowances for dependents under unemployment-insurance laws.

Les travailleurs indépendants et la législation sur les allocations familiales. (In Revue Française du Travail, Ministère du Travail et de la Sécurité Sociale, Paris, May 1947, pp. 482-491.)

Analysis of newly instituted system of family allowances for independent workers in France, through which former private compensation funds are replaced by public family allowance funds, as part of the general social-security system. Describes organization of the funds, types of allowances provided, amounts of premiums, etc.

Guaranteed Wage

The guaranteed annual wage—an annotated bibliography of source material. By Juliet C. Vradenburg. Stanford University, Calif., Stanford University Press, 1947. 101 pp. \$1.50.

Guaranteed wage: mirage or reasonable goal? By Emerson P. Schmidt. (In Commercial and Financial Chronicle, New York, May 22, 1947, p. 2727; reprints of article are available free from Economic Research Depart-

ment, Chamber of Commerce of the United States, Washington.)

Reproduction of an address in which the speaker raised some unsettled questions that he thinks should be considered in appraising guaranteed wage or employment plans.

Handicapped Workers

The Goodwill way: 1946 annual report of Goodwill Industries of America. Milwaukee, [1947]. 15 pp., charts, illus.

In 1946, Goodwill Industries employed 17,000 persons, 83 percent of them handicapped. Payments to the latter group amounted to over five and one-half million dollars. The report includes statistics on employment, by city, type of handicap, and age of worker.

Jobs for the handicapped through collective bargaining. Washington, American Federation of Labor, 1947. 10 pp., forms. (Collective bargaining series, No. 2.)

Information from this pamphlet, which outlines a program for employment of the handicapped, is given in this issue of the Monthly Labor Review (p. 205).

Second-injury funds as employment aids to the handicapped. By Marshall Dawson. Washington, U. S. Department of Labor, Division of Labor Standards, 1947. 10 pp.; processed. Free.

The handicapped worker—an asset in industry; a bibliography. Washington, U. S. Veterans Administration, General Reference Library, December 1946. 3 pp.; processed.

Vocational training for the handicapped through facilities other than hospital workshops—a bibliography. Washington, U. S. Veterans Administration, General Reference Library, December 1946. 3 pp.; processed.

Health and Industrial Hygiene

Longevity in the United States at new high in 1945. (In Statistical Bulletin, Metropolitan Life Insurance Co., New York, April 1947, pp. 3-5.)

Expectation of life at various ages is summarized, by sex and race, for selected periods back to 1900. The average length of life of the general population, as measured by expectation of life at birth, reached nearly 66 years in 1945—2¼ more than the 1939-41 average.

Nutrition in industry. Montreal, International Labor Office, 1946. 177 pp., charts, illus. (Studies and reports, new series, No. 4.) \$1. Distributed in United States by Washington Branch of I. L. O.

Describes the official programs carried out in the United States, Great Britain, and Canada to safeguard the nutrition of wartime workers, with particular emphasis on in-plant feeding. Summary data from this report were published by the I. L. O. in its Public Information Bulletin No. 2.

Lung changes associated with the manufacture of alumina abrasives. By Cecil Gordon Shaver and Andrew Rutherford Riddell. (In Journal of Industrial Hy-

giene and Toxicology, Baltimore, May 1947, pp. 145-157, bibliography, illus. \$1.25.)

Report on a series of cases of lung disease which developed in connection with an industrial process heretofore considered innocuous.

Silicosis and the ceramics worker. By Lester M. Merritt. (In Safety Engineering, New York, April 1947, pp. 61, 72. 30 cents.)

Examination of some 2,000 workers for disabling silicosis under the Ohio workmen's compensation law, since 1937, revealed that the majority of cases came from three industries—foundries, ceramic plants, and quarries. Prominent among those who became silicotic were brick-layer specialists working on industrial furnaces in steel mills and glass plants. Sources of hazards and protective measures for this group are discussed.

Riesgos en las minas de Bolivia para contraer silicosis. By Carlos Oroza Ferreira. (In Protección Social, Caja de Seguro y Ahorro Obrero, La Paz, January 1947, pp. 7-15.)

Housing

Annual report of the chairman of the National Committee on Housing, Inc. New York, 1947. 13 pp.; processed.

The need for investment capital for construction of large-scale rental housing is one of the points stressed in the report.

New farm homes for old: A study of rural public housing in the South. By Rupert B. Vance and others. University, Ala., University of Alabama Press, 1946. 245 pp. \$3.

A study of the background of rural public housing, its administration, and public policy concerning it, and of the human factors involved. The discussion is supported by tables compiled from information obtained in interviews with the persons housed.

5,580 paper houses. Newark, N. J., Housing Authority, 1947. 25 pp.

In Newark, the building of 5,580 houses which have been planned depends, the report states, upon Federal legislation. The Housing Authority has measured the cost of slums and concluded that it is high.

Selected references on housing of minorities. Washington, U. S. National Housing Agency, Office of the Administrator, March 1, 1947. 7 pp.; processed. (Racial relations service documents.)

The housing problem in France. By Alfred Sauvy. (In International Labor Review, Geneva, March-April 1947, pp. 227-246, chart. 50 cents. Distributed in United States by Washington Branch of I. L. O.)

In this article the director of the National Institute of Demographic Studies states the housing needs of France, examines various aspects of the housing problem—economic, financial, social, and judicial, and reviews achievements in provision of housing to the end of 1946.

Housing program for 1947. London, Ministry of Health, and Department of Health for Scotland, 1947. 12

pp. (Cmd. 7021.) 2d. net, H. M. Stationery Office, London.

Data from this report are given in this issue of the Monthly Labor Review (p. 196).

(See also under Cooperative Movement.)

Incomes and Expenditures

Incomes and expenditures of wage earners in Puerto Rico.

By Alice C. Hanson and Manuel A. Pérez. [San Juan], Puerto Rico Department of Labor, 1947. 152 pp., forms. (Bull. No. 1.)

This survey, made in 1941-42 with the cooperation of the U. S. Bureau of Labor Statistics, is a comprehensive record of the incomes and expenditures of families of wage earners in Puerto Rico. It provides the basis for a continuing index of the cost of living among such workers. Distribution of families by income level is given for all industries represented and separately for important industries such as sugar, tobacco, and needlework. Much supplementary information is included, covering, for example, size of family, hours worked, hourly earnings, and per capita quantity and value of articles consumed by workers at various income levels.

The net income of the Puerto Rican economy, 1940-44. By Daniel Creamer. Rio Piedras, University of Puerto Rico, Social Science Research Center, [1947]. 96 pp. 50 cents.

The author analyzes the trends and distribution of income and in addition provides basic facts concerning the degree of industrialization, industry-agriculture balance, government enterprises, Federal contributions to insular income, and related matters.

National income and expenditure of the United Kingdom, 1938 to 1946. London, H. M. Stationery Office, 1947. 60 pp. (Cmd. 7099.) 1s. net.

Part III of the report analyzes private income before and after tax, by source—wages, salaries, profits, rents. The data show that changes in the Government's tax policy have resulted in an increase in wage-earners' relative share of the income.

Working class income and household expenditure [in Great Britain]. (In Bulletin of the Oxford University Institute of Statistics, Oxford, May 1947, pp. 134-169, charts. 2s. 6d.)

Eighth of a series of surveys, started in 1940, on the main economic effects of wartime and postwar conditions on household expenditure of working-class families. Analyses accounts for a fortnight in June or July 1946 of 151 families of urban workers. Comparable data for 1945 indicate that no deterioration of income and no apparent change in total household expenditure took place between the two periods. Total expenditure on food, housing, fuel, and light absorbed about fifty percent of income.

Industrial Accidents and Accident Prevention

[Statistics of injuries in Federal employment.] (In Safety Bulletin, Federal Security Agency, Bureau of Em-

ployees' Compensation, Washington, June 1947, pp. 8, 9.)

Summary of data for over 330,000 lost-time injuries approved for compensation under the Federal Compensation Act in recent years, showing number, frequency rate, days of disability per case, and cost, by location, nature, and cause of injury.

52,525 compensable industrial injuries reported [in Illinois] in 1946. (In Illinois Labor Bulletin, Illinois Department of Labor, Chicago, May 1947, p. 9.)

Three coal-producing counties had the highest compensable injury rates per 1,000 population—22.1, 15.8, and 14.4, respectively, against a State average of 6.9. An agricultural county was lowest (0.3).

Industrial accident report: Compensable cases closed [in New Jersey] during year ending December 31, 1946. Trenton, New Jersey Department of Labor, Workmen's Compensation Bureau, [1947]. 9 pp.; processed.

The report covers occupational disease as well as accident cases. All but 5 of 151 persons receiving compensation for chrome ulceration were permanently partially disabled.

Instruction guide for safe crane operation. (In Safety Engineering, New York, April 1947, pp. 18, 19, 50-54, illus. 30 cents.)

Use of rock dust and water under the Federal mine safety code in limiting coal-dust explosions. By J. J. Forbes and C. W. Owings. Washington, U. S. Department of the Interior, Bureau of Mines, 1947. 12 pp., processed. (Information circular No. 7421.) Free.

United States safety-appliance standards. Washington, U. S. Interstate Commerce Commission, 1946. 52 pp.; diagrams.

Standards for safety equipment on different types of railroad cars and locomotives, established in orders of the Interstate Commerce Commission.

Watch out for the blind eye! By Roy S. Bonsib. (In Safety Engineering, New York, April 1947, pp. 16, 17, 42-45, illus. 30 cents.)

Prescribes a systematic plant program of testing for job vision, pointing out that increased demands on eyesight have been made by complexities of modern machinery, precision tasks, and, particularly, by the high operating speed of special-purpose machine tools characteristic of modern mass production.

Industrial Relations

Industrial relations and social change. New York, American Management Association, 1947. 30 pp. (Personnel series, No. 106.)

Labor dispute settlement. (In Law and Contemporary Problems, Vol. XII, No. 2, Durham, N. C., spring 1947, pp. 209-390. \$1.)

Well-rounded symposium on problems inherent in the peaceful and noncompulsory adjustment of labor controversies. Contributors include labor and management authorities as well as nonpartisan economists and lawyers with broad experience in the industrial relations field.

Pitfalls to avoid in labor arbitration: A practical guide for writing labor arbitration clauses and handling arbitration cases. Deep River, Conn., National Foremen's Institute, Inc., 1946. 56 pp., loose-leaf; processed. \$5.

Covers the most important features in arbitration, including not only organization of the arbitration tribunal, but also preparation of the case and enforcement of the award, with some brief statements on the law of arbitration.

Labor relations and labor law—a symposium. (In *University of Chicago Law Review*, Chicago, April 1947, pp. 331-454. \$1.)

Negotiating and interpreting the labor agreement. New York, American Management Association, 1947. 64 pp. (Personnel series, No. 110.)

One of the papers reproduced in this pamphlet is on the unionization of white-collar workers, and another, by a former member of the National Labor Relations Board, discusses the impact of the National Labor Relations Act on labor-management relations.

Industrial disputes—Australia and overseas. (In *I. P. A. Review*, Institute of Public Affairs—Victoria, Vol. 1, No. 1, Melbourne, March 1947, pp. 11-17, chart.)

It will be noted that this article is in the first issue of a new periodical of the Institute of Public Affairs—Victoria. The number also includes a statement on industrial relations, with suggestions, by the Institute's industrial committee, and an article entitled "If man-hour output is low—why?"

Le droit transitoire des conventions collectives (suite). (In *Revue Française du Travail*, Ministère du Travail et de la Sécurité Sociale, Paris, May 1947, pp. 458-481.)

Study of the French law of December 23, 1946, on collective agreements, including basic ideas underlying the legislation and their elaboration in the new system.

Les comités d'entreprise: Les délégués du personnel. Paris Confédération Générale du Travail, [1946?]. 64 pp.,

Contains the text and an analysis of legislation of February 22, 1945, and May 16, 1946, providing for the establishment of labor-management committees (*comités d'entreprise*) in industrial and other enterprises in France. Gives also the text of the law of April 16, 1946, on shop stewards, and notes on the French antecedents of the present labor-management committees.

Contratto collettivo nazionale di lavoro per gli addetti alla industria edilizia ed affini. (In *Notiziario della Confederazione Generale dell'Industria Italiana*, Rome, December 20, 1946, pp. 18-26.)

National collective labor agreement in Italy between the association of building constructors and the federation of building trades workers, signed at Rome December 1, 1946, to run until December 31, 1947. Matters covered include hiring of workers; job classifications; overtime rates; bonuses for work in mountains and malaria areas; production bonuses; weekly rest and holidays; marriage, sickness, and other leave; army service; first aid; minimum-wage changes based on the previous national agreement; and disputes.

Functions of professional organizations regarding nurses' working conditions. By Gertrude Höjer. (In *Trained Nurse and Hospital Review*, New York, July 1947, pp. 17-21. 25 cents.)

The president of the International Council of Nurses discusses collective bargaining by nurses in Sweden.

Industry Reports

Transactions of the fifth annual anthracite conference of Lehigh University, May 8-9, 1947, Bethlehem, Pa. Bethlehem, Lehigh University, 1947. 326 pp., diagrams, illus.

Two papers were presented in a session devoted to labor matters: History of labor relations in the anthracite industry; safety organization and methods in the production of anthracite.

Construction costs, 1947. (In *Engineering News-Record*, New York, April 17, 1947, pp. 91-211, charts. 35 cents.)

Includes data on hourly wage rates, by occupation, for the country as a whole and for individual cities, by year, for varying periods from 1907 to 1947, and for New York City, 1874 to 1947; labor productivity in selected cities, first quarter of 1947; and house and other construction costs, by year, over varying periods down to 1947.

Fourth report of the Millinery Stabilization Commission, Inc. New York, 1947. 151 pp., bibliography, charts.

Covers not only the four war years, 1942-45, but reviews significant aspects of the commission's work since its creation in 1936 by labor and management groups in the New York-New Jersey sector of the industry. The report contains considerable information on employment and wages in the millinery industry in New York and New Jersey, and in the United States as a whole.

Controlling factors in the future development of the Chinese coal industry. By Kung-ping Wang. New York, King's Crown Press, 1947. 231 pp., bibliography, maps, charts. \$3.

A chapter on the problem of coal-mine labor gives information on size, characteristics, and efficiency of the labor force, operation of the contract system, wages, social insurance, and the labor movement.

Electricity transformed. London, Labor Party, [1946?] 19 pp. 3d.

Gives a brief summary of the bill to nationalize the electricity supply industry of Great Britain, reasons for nationalization, and information on the industry.

Labor Legislation

Labor laws and their administration, 1946: Proceedings of the 29th convention of the International Association of Governmental Labor Officials, Milwaukee, September 30 through October 1-2, 1946. Washington, U. S. Department of Labor, Division of Labor Standards, 1947. 194 pp. (Bull. No. 88.) 40 cents, Superintendent of Documents, Washington.

The new labor law, including complete analysis, congressional interpretation, conference and committee reports, text of Labor-Management Relations Act, 1947. Washington, Bureau of National Affairs, Inc., 1947. Various paged. \$5.

The Portal-to-Portal Act of 1947—what it does, how it applies, what it means. Washington, Bureau of National Affairs, Inc., 1947. Various paged; processed. \$5.

What you should know about the Wage and Hour Act—a manual of questions and answers for employers, executives, and employees. Compiled and edited by Arthur T. Jacobs. Deep River, Conn., National Foremen's Institute, Inc., 1946. 55 pp. 75 cents.

A guide to the law and legal literature of Bolivia. By Helen L. Claggett. Washington, Library of Congress, Law Library, 1947. 110 pp. (Latin American series, No. 12.) 55 cents, Superintendent of Documents, Washington.

Includes a section on labor legislation and one on immigration.

A similar guide (Latin American series No. 14) for Paraguay also has been issued recently, and compilations for a number of other Latin American countries are in process.

Labor Organizations and Activities

Directory of labor unions in the United States: National and international unions, State labor organizations, and union research directors, May 1947. Washington, U. S. Bureau of Labor Statistics, 1947. 30 pp. (Bull. No. 901.) 10 cents, Superintendent of Documents, Washington.

The many and the few: A chronicle of the dynamic auto workers. By Henry Kraus. Los Angeles, Plantin Press, 1947. 293 pp. \$2.50.

Graphic presentation, by a participant, of the historic General Motors sit-down strike of 1937 and the events leading to the work stoppage.

Features of union health and welfare funds. By F. Beatrice Brower. (In Conference Board Management Record, National Industrial Conference Board, Inc., New York, April 1947, pp. 80-83.)

Analysis of employee-insurance provisions in 45 collective-bargaining agreements. Four-fifths of the plans are financed entirely by the employer; only two provide that the fund shall be administered and the benefits distributed by the union. Details for 25 plans are summarized as to contributions and types and amounts of benefits.

The social function of trade unionism. By Frank Tannenbaum. (In Political Science Quarterly, New York, June 1947, pp. 161-194. \$1.)

50 years of progress—the building of the Scottish Trades Union Congress, 1897-1947. Glasgow, Scottish Trades Union Congress, 1947. 38 pp., illus. 2s.

Migrants and Migration

Immigration and population trends in the United States, 1900-40. By Ernest Rubin. (In American Journal of Economics and Sociology, New York, April 1947, pp. 345-362. \$1.)

Migrant labor—a human problem: Report and recommendations, Federal Interagency Committee on Migrant Labor. Washington, U. S. Department of Labor, Retraining and Reemployment Administration, 1947. 58 pp., illus. 30 cents, Superintendent of Documents, Washington.

A brief summary of this report was published in the Monthly Labor Review for July (p. 70).

Los braceros. México, D. F., Secretaría del Trabajo y Previsión Social, Dirección de Previsión Social, 1946. 120 pp., charts.

A Mexican Government study of agricultural labor recruited in Mexico for work in the United States during the war. The report covers terms of the agreements between the two countries; terms of the labor contracts; and characteristics of the workers (age, marital status, occupation in Mexico, etc.), their situation in the United States, and effects on them of their stay in this country.

Refugees in America: Report of the Committee for the Study of Recent Immigration from Europe. By Maurice R. Davie. New York, Harper & Bros., 1947. xxi, 453 pp., charts, illus. \$4.50.

Summarizes results of a survey which sought data on extent of refugee migration, types of immigrants, their problems, how they have adjusted to their new environment, and their effect on American society. The study was sponsored by a group of social agencies for the assistance of refugees.

Les étrangers in France. (In Bulletin de la Statistique Générale, Ministère de l'Économie Nationale, Institut National de la Statistique et des Études Économiques, Paris, March 1947, pp. 165-232, maps, charts.)

Detailed study of legislation concerning foreigners in France, covering entrance into the country, naturalization, etc., and extensive analysis of numbers of foreign residents since 1851, with special emphasis on numbers in 1936, 1945, and 1946, by national origin, occupational category, age, etc.

Personnel Management

Getting and using employees' ideas. New York, American Management Association, 1946. 31 pp. (Production series, No. 165.) 50 cents.

The foreman in manpower management. By Lillian M. Gilbreth and Alice Rice Cook. New York, McGraw-Hill Book Co., Inc., 1947. 199 pp. \$2.50.

Designed to give the foreman the "know-how of human relations," and to help him correlate the human factor with the other maintenance problems of his production job.

How to supervise people in industry: A guide for supervisors on how to understand people and control their behavior. By Eliot D. Chapple and Edmond F. Wright. Deep River, Conn., National Foremen's Institute, Inc., 1946. 123 pp. \$2.50.

Personnel manual for executives. By Ross Young. New York, McGraw-Hill Book Co., Inc., 1947. 207 pp., bibliography. \$2.50.

Placement and probation in the public service. Chicago, Civil Service Assembly of the United States and Canada, 1946. 201 pp. \$3.50.

Production and Labor Productivity

Recent productivity trends and their implications. By W. D. Evans. (In Journal of the American Statistical Association, Washington, New York, June 1947, pp. 211-223. Reprints of the article are available at 25 cents each.)

The author discusses the meaning of the term labor productivity and explains the causes of recent controversies over the subject as resulting in part from lack of agreement as to the meaning of the term. He anticipates that advances in productivity will be especially rapid during the coming three or four years. Greater productive efficiency and low production levels may bring unemployment and distress, but "greater productive efficiency and high employment levels together promise standards of living for all groups far above the best we have known in the past."

Output and productivity in the electric and gas utilities, 1899-1942. By Jacob Martin Gould. New York, National Bureau of Economic Research, Inc., 1946. 189 pp., charts. (Publication No. 47.) \$3.

Trends in man-hours expended per unit for the manufacture of selected machine tools, 1939 to 1945. Washington, U. S. Bureau of Labor Statistics, 1947. 56 pp.; processed. Free.

A summary of this study is given in this issue of the Monthly Labor Review (p. 186).

Industrial productivity handbook. New York, Mill & Factory, May 1947. 682 pp., charts, illus. \$1.

The May number of Mill and Factory, devoted entirely to productivity, is designed primarily for the use of plant managers who desire up-to-date information about methods of increasing productivity, including ways of obtaining the cooperation of employees. Statements by various labor leaders are included.

Selected references on productivity. Prepared by Helen D. Reville. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Lippincott Library, March 14, 1947. 7 pp., processed.

References to material published from 1939 to 1946.

How Russia gets output. By R. B. Suthers. London, Labor Party, 1947. 15 pp. (Labor discussion series, No. 14.) 2d.

Incentives, the Stakhanov movement, voluntary labor service, and other Soviet institutions for increasing production are discussed in this pamphlet.

Reconstruction

Third report of California State Reconstruction and Re-employment Commission to the Governor and the Legislature. Sacramento, 1947. 108 pp., charts.

Summarizes the work of the commission from August 1943 and gives details of its activities in 1946. Among the matters receiving special attention were housing, social security, vocational training, industrial relations, and veterans' affairs.

The industrial charter: A statement of conservative industrial policy. London, Conservative and Unionist Central Office, 1947. 40 pp. 1s.

This statement outlines measures suggested by the Conservative Party for dealing with the present industrial crisis in Great Britain, defines the Government-industry relationship which the party advocates, and presents a "charter of rights and duties designed to give the worker in industry opportunity and status."

Report of the Advisory Planning Board. Delhi, India, 1947. 193 pp. 2s. 9d., Manager of Publications, Delhi.

Reviews the planning already done by the Central and Provincial Governments of India and makes recommendations. Includes summaries of reports of industrial panels for 20 industries.

Reconversion and reconstruction in the U. S. S. R. By A. Yugow. (In International Labor Review, Montreal, January-February 1947, pp. 62-76. 50 cents. Distributed in United States by Washington Branch of I. L. O.)

Discussion of the program of the Soviet Union's fourth 5-year plan. Among the subjects treated are housing, manpower and employment, price control, and rationing.

Social Security

A program for national security: Report of the President's Advisory Commission on Universal Training. Washington, Government Printing Office, 1947. 448 pp. 75 cents.

This comprehensive report presents the principles and framework for an effective program of universal training, recommended as necessary for national security. One of the several appendixes indicates the relation of a universal training program to the labor market.

Public assistance and related legislation, 1946. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, May 1947, pp. 30-35. 15 cents, Superintendent of Documents, Washington.)

Summarizes State legislative changes made in 1946 in the three special public assistance programs—for the aged, blind, and dependent children—to take advantage of increased Federal funds made available by 1946 amendments to the Federal Social Security Act. Statistics, by State, of assistance to each of these three groups in March 1947 are included.

Social insurance versus poor relief. By Frieda Wunderlich. (In Social Research, New York, March 1947, pp. 75-94. \$1.)

The author argues for compulsory social insurance, pointing out its advantages over general assistance.

Temporary disability insurance coordinated with unemployment insurance. Prepared by Bureau of Research and Statistics and Bureau of Employment Security, Social Security Administration. Washington, Federal Security Agency, Social Security Administration, 1947. 32 pp., bibliography; processed.

The essential features and procedures of a State program of cash sickness benefits, integrated with the State unemployment-insurance system, are set forth and considered. Advantages of the exclusive type of State fund over insurance under private plans are pointed out. (A briefer presentation is given in an article of similar title in the Social Security Bulletin, March 1947.)

Annual report of the Railroad Retirement Board, with the third actuarial valuation, fiscal year ended June 30, 1946. Washington, 1947. 193 pp., charts. 40 cents, Superintendent of Documents, Washington.

Contains details of operations under the Federal Railroad Retirement and Railroad Unemployment Insurance Acts.

Social security in Chile. By Wilbur J. Cohen. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, May 1947, pp. 10-19. 15 cents, Superintendent of Documents, Washington.)

Description of the comprehensive Chilean social-insurance system, which offers economic protection against the risks of sickness, invalidity, maternity, and old age. Preventive medicine is emphasized.

A guide to the [British] National Insurance Act, 1946. By Alban Gordon. London, Labor Party, [1946]. 36 pp. 6d.

This Act consolidates the previously existing schemes of insurance against sickness, unemployment, and old age. Benefits are also to be paid to widows and guardians and for death. Subject to certain exceptions, the entire population of Great Britain is insured under the Act.

National health insurance in Great Britain, 1911-46. By R. W. Harris. London, George Allen and Unwin, Ltd., 1946. 224 pp. 12s. 6d.

Voluntary health insurance in western Europe—its origins and place in national programs. By George St. J. Perrott and Joseph W. Mountin. (In Public Health Reports, Federal Security Agency, U. S. Public Health Service, Washington, May 23, 1947, pp. 733-767, bibliography, charts. 10 cents, Superintendent of Documents, Washington.)

Veterans Affairs

AVC's veterans affairs legislative program, 1947-48. New York, American Veterans Committee (1860 Broadway), 1947. 63 pp.

Contains 32 "technically drafted bills" on veterans

affairs which are stated to be in keeping with the organization's principle of "citizens first, veterans second." The brochure was prepared, the committee states, primarily to acquaint members of Congress with the aims of the AVC and to assist them in introducing the proposed bills.

Home loans under the G. I. Bill of Rights: How your Government will help you finance the building or buying of a home. Washington, U. S. National Housing Agency, 1947. 12 pp. Rev. ed. 5 cents, Superintendent of Documents, Washington.

Restless G. I.'s riding job merry-go-round. By A. N. Weeksler. (In Mill and Factory, New York, April 1947, pp. 93-97, map, charts.)

The author makes the point that a large percentage of veterans are moving from job to job and are accumulating no seniority and little working experience. He raises the question as to their status in some future recession.

Director's report of State of Washington Department of Veterans' Affairs, June 1, 1945, to October 31, 1946. Olympia, 1946. 36 pp., charts.

Describes the organization and objectives of the department, and the special services that have been made available to veterans.

Wages and Hours of Labor

New indexes of hourly and weekly earnings compiled by the Federal Reserve Bank of New York. By George Garvy and Robert E. Lewis. (In Journal of the American Statistical Association, Washington, June 1947, pp. 256-270, charts. Reprints of articles are available at 25 cents each.)

The new indexes of hourly and weekly earnings of non-agricultural workers supplant the composite index of wages published by the Federal Reserve Bank of New York since February 1938. They are described as combining wage statistics from government and private sources in an attempt to furnish, within the limitations of available data, the best possible measure of over-all movements in the general level of earnings. The article is a technical description of the construction, nature, and limitations of the indexes.

Wage theories before certain industry committees of the wage and hour administration. By Mary Yolande Schulte. Washington, Catholic University of America, 1946. 341 pp., bibliography. (Studies in economics, Vol. 19.) \$3.50.

This doctoral dissertation analyzes the testimony before selected industry committees, established under terms of the Federal Fair Labor Standards Act of 1938, with reference to the conformity of the testimony to various wage theories. An introductory chapter traces the development of the different theories of wages.

Perquisites furnished hired farm workers, United States and major regions, 1945. Washington, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1946. 60 pp. (Surveys of wages and wage rates in agriculture, Report No. 18.)

A brief summary of this report is given in this issue of the Monthly Labor Review (p. 193).

Pay scales in the California State civil service. Sacramento, State Personnel Board, 1946. 125 pp.

Lists titles and salary ranges of all classes of positions, incorporating revisions in classification and pay plans up to October 1, 1946.

The distribution of income among wage workers in railway employment [in Canada], 1939-47. By John L. McDougall. (In Canadian Journal of Economics and Political Science, Toronto, May 1947, pp. 248-255, charts. \$1.)

Salaires et classifications professionnelles: Fascicule I, Textes généraux. Paris, Ministère du Travail et de la Sécurité Sociale, Direction Générale du Travail et de la Main-d'Oeuvre, 1946. 30 pp.

Collection of general laws, decrees, circulars, etc., dealing with wage control, rates, classifications, etc., in France from November 1939 to October 22, 1946, arranged under four heads: Stabilization and control; provisional wage increases at liberation from German control, beginning with August 24, 1944; reorganization of the wage system, mainly in 1945; and the wage increase of July 1, 1946.

Part 2 of this series of publications reproduces official enactments establishing wage zones, and job classifications according to skill. Succeeding parts deal with methods of computing wages for some 20 industry groups.

Allied policy on wages in occupied Germany. By Matthew A. Kelly. (In International Labor Review, Geneva, May 1947, pp. 351-371. 50 cents. Distributed in United States by Washington Branch of I. L. O.)

Report on the wage policies of the Allied Control Council, and on actual developments with respect to wages and prices, in occupied Germany.

Arbeidslønninger, 1945. Oslo, Statistisk Sentralbyrå, 1947. 55 pp., charts.

Summarizes the movement of wages between 1935 and 1945 and gives detailed statistics of wage rates, average hourly earnings, and number of hours worked in industry and trade for the years 1940 to 1945.

Women in Industry

Postwar labor turn-over among women factory workers. Washington, U. S. Bureau of Labor Statistics, 1947. 9 pp. (Serial No. R. 1880; reprinted from Monthly Labor Review, March 1947.) Free.

Women workers in wartime and reconversion. By Mary T. Waggaman. Washington, National Catholic Welfare Council, Social Action Department, 1947. 32 pp., bibliography. 5 cents.

Includes chapters on wages, the drive for equal pay for equal work, labor legislation for women, and membership in trade-unions.

Your job future after college. Washington, U. S. Department of Labor, Women's Bureau, 1947. 8 pp. Free.

Careers for women in real estate and in life insurance. By Dorée Smedley and Lura Robinson in collaboration with Vocational Guidance Research. New York, Greenberg, 1946. 192 pp. \$3.

L'égalité des salaires, masculins et féminins. By B. Piguet. (In Revue Française du Travail, Ministère du Travail et de la Sécurité Sociale, Paris, May 1947, pp. 419-432.)

Review of the parallel development in the International Labor Organization and in France of the postwar movement for equal pay for men and women for equal work. Gives historical background for recommendations, etc., in the I. L. O., and evolution of the idea in France in the periods when wages were regulated by individual contract, collective agreement, and, since 1939, by State control.

General Reports

Memorandum on university research programs in the field of labor, 1947. Washington, Social Science Research Council, Committee on Labor Market Research, 1947. 42 pp.

Survey of labor economics. By Florence Peterson. New York, Harper & Bros., 1947. 843 pp., bibliographies. \$4.

This textbook presents basic factual data, and discusses the major theories which seek to explain the causes and results of economic phenomena relating to labor. It deals with the subjects commonly included in texts on labor problems, but the approach is not of labor as a problem but rather as one special field of economics. Emphasis is given to historical reasons for the development of current practices, laws, and other institutional arrangements with respect to labor. While the data and discussion are largely confined to the United States, there are frequent references to similar or contrasting experiences in other countries. The book is in four parts: Employment and unemployment; Wages and hours; Labor unions and labor-management relations; Social security.

Twenty-seventh annual report of the National Bureau of Economic Research. By Arthur F. Burns. New York, National Bureau of Economic Research, Inc., 1947. 91 pp.

Part I describes certain contemporary economic situations and problems in terms of the light thrown on them by recent publications of the National Bureau of Economic Research. Part II consists of reports on particular projects. Among projects of interest to labor currently under way are those dealing with output and employment in transportation; employment in government and education since 1900; and estimates of the labor force, employment, and unemployment in the United States, 1910-40.

L'évolution de l'économie belge en 1946. (In Études et Conjoncture, Économie Mondiale, Ministère de l'Économie Nationale, Institut National de la Statistique et des Études Économiques, Paris, March 1947, pp. 65-91, charts.)

Survey of Belgian prices, wages, financial conditions, production, exports, and imports.

Rapport sur "les objectifs et les moyens d'action de la F. G. T. B." By Paul Finet. [Brussels?], Fédération Générale du Travail de Belgique, 1947. 47 pp.

Succinct résumé of the economic position of Belgium,

including tables on production, imports and exports, prices, and wages, and information on social-security provisions, worker participation in management, objectives of the trade-union movement, etc. The report was prepared for the conference of the General Federation of Labor, May 31-June 2, 1947.

Primer censo industrial de Colombia, 1945: Departamento de Antioquia. Bogotá, Contraloría General de la República, Dirección Nacional del Censo Industrial, 1947. 277 pp., charts.

Results of the first industrial census of Colombia are being published by department. This volume for the department of Antioquia includes data, by industry, on wages and salaries, number of 8-hour shifts worked, and number of unionized workers.

Labor policy in occupied Japan. By Miriam S. Farley. (In Pacific Affairs, New York, June 1947, pp. 131-140. 75 cents.)

Survey of labor developments in Japan under American occupation, and their bearing upon the democratization of the country.

Russia looks at northern Korea. By John N. Washburn. (In Pacific Affairs, New York, June 1947, pp. 152-160. 75 cents.)

Review of developments in northern Korea under Soviet occupation, including statements on labor issues.

Trabajo y acción social. (In Boletín de Estadística, Instituto Nacional de Estadística, Madrid, October-December 1946, pp. 156-200.)

Includes data on wages in Spain of men, women, and apprentices, separately, by occupation and year, 1943-45, with summary figures for 1936 and 1939-45; labor applications and placements, and work stoppages, July-September 1946; and different types of social-security benefits paid in 1945 and first part of 1946.

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A: Employment and Pay Rolls

TABLE A-1: Estimated Total Labor Force Classified by Employment Status, Hours Worked, and Sex

[Source: U. S. Department of Commerce, Bureau of the Census]

Labor force	Estimated number of persons 14 years of age and over ¹ (in thousands)												
	1947						1946						
	June ²	May	April	March	February	January	December	November	October	September	August	July	June
Total, both sexes													
Total labor force ³	64,007	61,760	60,650	59,960	59,630	59,510	60,320	60,980	61,160	61,340	62,200	62,820	62,000
Civilian labor force	62,609	60,290	59,120	58,390	58,010	57,790	58,430	58,970	58,990	59,120	59,750	60,110	58,930
Unemployment	2,555	1,960	2,420	2,330	2,490	2,400	2,120	1,930	1,960	2,070	2,060	2,270	2,570
Employment	60,055	58,330	56,700	56,060	55,520	55,390	56,310	57,040	57,030	57,050	57,690	57,840	56,360
Nonagricultural	49,678	49,370	48,840	48,820	48,600	48,890	49,100	49,140	48,410	48,300	48,550	47,870	46,350
Worked 35 hours or more	41,747	41,330	40,120	40,680	40,750	41,500	42,120	41,800	41,400	41,610	40,720	39,450	39,140
Worked 15-34 hours	4,532	4,780	4,820	4,880	4,690	4,280	4,290	4,730	4,340	3,650	3,810	3,770	4,140
Worked 1-14 hours ⁴	1,243	1,550	1,570	1,500	1,440	1,400	1,350	1,270	1,260	1,150	960	1,020	1,130
With a job but not at work ⁵	2,156	1,710	2,330	1,760	1,720	1,710	1,340	1,340	1,410	1,890	3,060	3,630	1,940
Agricultural	10,377	8,960	7,860	7,240	6,920	6,500	7,210	7,900	8,620	8,750	9,140	9,970	10,010
Worked 35 hours or more	8,326	6,940	5,520	4,750	4,320	4,040	5,150	6,020	6,820	7,110	6,970	7,840	8,160
Worked 15-34 hours	1,700	1,660	1,770	1,790	1,890	1,700	1,450	1,560	1,510	1,350	1,830	1,810	1,610
Worked 1-14 hours ⁴	187	210	260	300	280	300	320	160	200	170	140	160	150
With a job but not at work ⁵	165	150	310	400	430	460	290	160	90	120	200	160	90
Male													
Total labor force ³	45,839	44,620	44,310	43,990	43,700	43,560	43,860	43,940	43,970	44,040	44,990	45,370	44,670
Civilian labor force	44,460	43,170	42,800	42,440	42,100	41,860	41,990	41,950	41,820	41,850	42,580	42,710	41,660
Unemployment	1,707	1,420	1,900	1,850	2,010	1,950	1,690	1,520	1,550	1,580	1,600	1,760	2,010
Employment	42,753	41,750	40,900	40,590	40,090	39,910	40,300	40,430	40,270	40,270	40,980	40,950	39,650
Nonagricultural	34,729	34,340	33,970	34,030	33,830	34,060	34,010	34,050	33,500	33,480	33,660	33,140	32,040
Worked 35 hours or more	30,639	30,160	29,260	29,400	29,280	29,910	30,290	30,140	29,750	29,940	29,580	28,660	28,150
Worked 15-34 hours	2,333	2,350	2,530	2,680	2,540	2,200	2,120	2,390	2,200	1,770	1,950	1,930	2,120
Worked 1-14 hours ⁴	469	690	730	660	670	660	600	590	560	460	410	400	520
With a job but not at work ⁵	1,288	1,140	1,450	1,290	1,340	1,290	1,000	930	990	1,310	1,720	2,150	1,250
Agricultural	8,024	7,410	6,930	6,260	6,260	5,850	6,290	6,380	6,770	6,790	7,320	7,810	7,610
Worked 35 hours or more	7,187	6,400	5,260	4,600	4,190	3,850	4,860	5,360	5,810	6,020	6,210	6,770	6,900
Worked 15-34 hours	588	770	1,230	1,380	1,460	1,330	950	780	770	560	880	810	570
Worked 1-14 hours ⁴	101	130	190	230	230	250	220	90	120	100	80	100	60
With a job but not at work ⁵	148	110	250	350	380	420	260	150	70	110	150	130	80
Female													
Total labor force ³	18,168	17,140	16,340	15,970	15,930	15,950	16,460	17,040	17,190	17,300	17,210	17,450	17,330
Civilian labor force	18,149	17,120	16,320	15,950	15,910	15,930	16,440	17,020	17,170	17,270	17,170	17,400	17,270
Unemployment	848	540	520	480	480	450	430	410	410	490	460	510	560
Employment	17,302	16,580	15,800	15,470	15,430	15,480	16,010	16,610	16,760	16,780	16,710	16,890	16,710
Nonagricultural	14,949	15,030	14,870	14,790	14,770	14,830	15,090	15,090	14,910	14,820	14,890	14,730	14,310
Worked 35 hours or more	11,108	11,170	10,860	11,280	11,470	11,590	11,830	11,660	11,650	11,670	11,140	10,790	10,990
Worked 15-34 hours	2,199	2,430	2,290	2,200	2,150	2,080	2,170	2,340	2,140	1,880	1,860	1,840	2,020
Worked 1-14 hours ⁴	774	860	840	840	770	740	750	680	700	690	550	620	610
With a job but not at work ⁵	868	570	880	470	380	420	340	410	420	580	1,340	1,480	690
Agricultural	2,353	1,550	930	680	660	650	920	1,520	1,850	1,960	1,820	2,160	2,400
Worked 35 hours or more	1,139	540	260	150	130	190	290	660	1,010	1,090	700	1,070	1,260
Worked 15-34 hours	1,112	890	540	410	430	370	500	780	740	790	950	1,000	1,040
Worked 1-14 hours ⁴	86	80	70	70	50	50	100	70	80	70	60	60	90
With a job but not at work ⁵	17	40	60	50	50	40	30	10	20	10	50	30	10

¹ Estimates are subject to sampling variation which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution. All data exclude persons in institutions.

² Beginning in June 1947, the estimates are presented rounded to the nearest thousand, and, for convenience, figures under 100,000 are no longer replaced with asterisks. These changes from previous practice do not reflect an improvement in reliability of the data but are made in order to achieve consistency with other census releases on related subjects. Because of rounding the individual figures no longer add to group totals.

³ Total labor force consists of the civilian labor force and the armed forces.

⁴ Excludes persons engaged only in incidental unpaid family work (less than 15 hours); these persons are classified as not in the labor force.

⁵ Includes persons who had a job or business, but who did not work during the census week because of illness, bad weather, vacation, labor dispute, or because of temporary lay-off with definite instructions to return to work within 30 days of lay-off. Does not include unpaid family workers.

TABLE A-2: Estimated Number of Employees¹ in Nonagricultural Establishments, by Industry Division

(In thousands)

Industry division	1947						1946								Annual averages	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	1939	
Total estimated employment	42,342	41,916	41,823	42,043	41,849	41,803	42,928	42,439	42,065	41,848	41,466	40,877	40,680	42,042	30,287	
Manufacturing	15,317	15,230	15,429	15,510	15,475	15,372	15,348	15,271	15,064	15,035	14,876	14,526	14,371	17,381	10,078	
Mining	890	881	856	879	880	883	874	883	883	884	886	873	864	917	845	
Contract construction ¹	1,763	1,688	1,619	1,534	1,502	1,527	1,644	1,713	1,753	1,747	1,713	1,627	1,532	1,567	1,150	
Transportation and public utilities	4,115	3,968	3,836	4,020	4,011	4,014	4,071	4,101	4,093	4,064	4,103	4,051	3,996	3,619	2,912	
Trade	8,580	8,547	8,551	8,565	8,507	8,552	9,234	8,898	8,667	8,523	8,402	8,337	8,342	7,322	6,705	
Finance ²	1,567	1,565	1,554	1,555	1,546	1,544	1,546	1,543	1,540	1,534	1,554	1,549	1,531	1,401	1,382	
Service ³	4,711	4,590	4,552	4,565	4,561	4,527	4,573	4,555	4,514	4,456	4,430	4,426	4,430	3,786	3,228	
Federal, State, and local Government, including Federal force-account construction	5,399	5,447	5,426	5,415	5,367	5,384	5,638	5,475	5,551	5,605	5,502	5,488	5,614	6,049	3,987	

¹ Estimates include all full- and part-time wage and salaried workers in non-agricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded. These estimates have been adjusted to levels indicated by final 1945 data made available by the Bureau of Employment Security of the Federal Security Agency. Data for the current and immediately preceding months are subject to revision.

² These figures cover all employees of private firms whose major activity is construction. They are not directly comparable with the construction em-

ployment estimates presented in table 2, p. 1111, of the June 1947 issue of this publication, which include self-employed persons, working proprietors, and force-account workers and other employees of nonconstruction firms or public bodies who engage in construction work, as well as all employees of construction firms. An article presenting this other construction employment series appears in this issue of the Monthly Labor Review, p. 202, and will appear in every third issue hereafter.

³ Finance and Service were formerly combined. Comparable series from January 1939 are available upon request.

TABLE A-3: Estimated Number of Employees¹ in Manufacturing Industries, by Major Industry Group

(In thousands)

Industry division	1947						1946							Annual averages	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	1939
All manufacturing.....	15,317	15,230	15,429	15,510	15,475	15,372	15,348	15,271	15,064	15,035	14,876	14,526	14,371	17,381	10,078
Durable goods.....	7,848	7,780	7,892	7,892	7,857	7,781	7,731	7,721	7,623	7,590	7,486	7,307	7,172	10,297	4,357
Nondurable goods.....	7,469	7,450	7,537	7,618	7,618	7,591	7,617	7,550	7,441	7,445	7,390	7,219	7,199	7,084	5,720
Iron and steel and their products.....	1,833	1,829	1,842	1,840	1,832	1,823	1,787	1,800	1,761	1,776	1,751	1,704	1,663	2,034	1,171
Electrical machinery.....	744	719	732	775	777	773	771	763	751	734	713	695	688	914	355
Machinery, except electrical.....	1,520	1,533	1,536	1,522	1,512	1,504	1,489	1,479	1,458	1,434	1,411	1,385	1,362	1,585	690
Transportation equipment, except automobiles.....	583	592	601	596	599	603	600	592	588	590	607	618	624	2,951	193
Automobiles.....	909	916	987	971	965	924	943	954	954	969	925	894	853	845	466
Nonferrous metals and their products.....	467	480	491	496	498	494	493	488	483	477	471	457	440	525	283
Lumber and timber basic products.....	731	716	690	673	660	654	652	659	650	642	643	620	612	589	465
Furniture and finished lumber products.....	509	506	516	524	523	514	504	497	489	482	482	469	467	429	385
Stone, clay, and glass products.....	492	489	497	495	491	492	492	489	489	486	483	465	463	422	349
Textile-mill products and other fibre manufactures.....	1,292	1,310	1,336	1,355	1,362	1,354	1,353	1,340	1,322	1,310	1,296	1,281	1,296	1,330	1,235
Apparel and other finished textile products.....	1,197	1,192	1,222	1,277	1,274	1,244	1,229	1,209	1,211	1,193	1,170	1,121	1,152	1,080	894
Leather and leather products.....	385	384	398	404	405	403	403	398	395	397	395	396	399	378	383
Food.....	1,565	1,513	1,505	1,487	1,485	1,513	1,548	1,544	1,490	1,564	1,579	1,512	1,435	1,418	1,192
Tobacco manufactures.....	97	96	95	100	103	104	105	104	102	100	99	98	99	103	105
Paper and allied products.....	462	461	465	467	467	465	465	461	454	450	447	442	445	389	320
Printing, publishing, and allied industries.....	693	690	689	687	687	683	688	679	672	662	660	656	650	549	561
Chemicals and allied products.....	724	740	747	750	747	741	732	728	714	704	692	685	689	873	421
Products of petroleum and coal.....	231	230	223	224	222	222	221	222	222	224	223	221	218	170	147
Rubber products.....	270	276	289	293	295	294	296	294	290	281	274	264	272	231	150
Miscellaneous products.....	553	558	568	574	571	568	577	571	569	560	555	543	544	563	311

¹ Estimates include all full- and part-time production and nonproduction workers in manufacturing industries who worked or received pay during the pay period ending nearest the 15th of the month. These estimates have been adjusted to levels indicated by the final 1945 data made available by

the Bureau of Employment Security of the Federal Security Agency. Comparable series from January 1939 are available upon request. Data for the current and immediately preceding months are subject to revision.

TABLE A-4: Estimated Number of Employees¹ in Manufacturing Industries, by State

[In thousands]

Region and State	1947					1946								Annual average 1943
	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	
New England:														
Maine ²	108.0	108.6	115.3	118.0	117.9	117.8	117.1	117.7	117.6	118.7	115.6	113.7	110.7	144.4
New Hampshire ²	78.7	81.1	83.0	83.5	82.4	83.0	81.6	79.0	79.6	79.2	77.2	79.3	78.9	77.0
Vermont ²	39.4	42.0	42.9	43.2	43.3	43.1	41.8	42.1	41.6	41.4	40.6	40.5	40.1	41.3
Massachusetts ²	734.3	749.9	763.5	765.5	761.6	766.9	762.1	754.1	750.0	741.2	727.9	740.6	738.3	835.6
Rhode Island ²	147.7	150.6	153.8	154.0	153.6	154.4	152.0	150.5	147.7	145.2	141.7	144.6	143.6	169.4
Connecticut ²	417.0	420.1	424.2	425.2	422.0	420.6	416.1	410.9	406.7	396.5	390.9	392.0	379.0	504.2
Middle Atlantic:														
New York ²	1835.4	1870.6	1911.4	1916.1	1900.1	1899.0	1897.8	1888.8	1876.0	1853.2	1796.6	1814.2	1803.1	2115.7
New Jersey ²	727.0	738.5	768.6	768.4	770.3	768.0	757.7	753.2	748.9	742.8	733.2	735.8	727.8	951.1
Pennsylvania ²	1494.5	1507.7	1511.8	1513.1	*1518.8	*1515.1	*1511.7	*1458.1	*1482.6	*1466.7	*1444.8	*1423.9	*1345.9	*1579.3
East North Central:														
Ohio ²	1237.9	1254.6	1255.4	1251.3	1242.7	1231.1	1238.3	1230.5	1223.5	1205.1	1171.5	1161.2	1147.5	1362.5
Indiana ²	548.4	554.4	555.8	556.2	549.6	544.2	538.4	538.3	545.1	511.3	511.7	495.2	485.2	633.1
Illinois ²	1235.1	1248.2	*1249.4	*1251.1	*1244.4	*1236.0	*1229.6	*1203.4	*1195.7	*1186.0	*1165.8	*1159.8	*1130.6	*1263.7
Michigan ²	1035.0	1036.0	1046.7	1038.5	1027.8	1032.8	1041.6	1033.3	1040.6	1010.4	982.3	942.9	939.2	1181.8
Wisconsin ²	425.8	429.8	*429.3	*424.6	*420.7	*422.5	*420.1	*412.8	*417.8	*411.3	*423.8	*387.8	*381.1	*442.8
West North Central:														
Minnesota ²	193.5	195.1	197.8	199.1	198.5	199.6	199.7	195.5	199.3	194.6	193.2	182.8	184.2	215.6
Iowa ²	144.9	146.6	*147.0	*149.4	*148.8	*146.9	*144.0	*132.0	*136.4	*143.3	*136.1	*136.3	*135.4	*161.7
Missouri ²	351.6	355.5	*355.9	*359.7	*355.3	*357.9	*356.0	*343.7	*340.2	*341.4	*333.9	*330.4	*326.4	*412.9
North Dakota ²	6.8	6.5	*6.5	*6.3	*6.4	*6.6	*6.5	*6.0	*5.9	*6.2	*5.9	*5.8	*6.1	*5.6
South Dakota ²	11.2	11.5	*11.3	*11.5	*11.4	*11.5	*10.5	*8.4	*8.2	*9.9	*9.8	*10.3	*10.2	*10.3
Nebraska ²	42.3	41.8	42.8	42.8	44.1	44.5	44.0	39.6	40.3	43.3	41.5	42.0	42.3	60.7
Kansas ²	79.1	79.3	77.8	78.1	78.8	79.6	79.5	74.1	73.8	78.1	76.1	74.8	76.2	144.2
South Atlantic:														
Delaware ²	45.4	44.9	45.0	44.6	45.3	45.2	45.0	45.1	48.0	47.9	45.4	44.7	43.3	55.2
Maryland ²	229.0	231.0	236.2	237.3	237.9	241.3	240.7	238.6	245.5	249.0	238.2	234.5	224.2	348.8
District of Columbia ²	17.1	17.2	17.1	16.9	16.9	17.3	17.0	16.7	16.7	16.4	16.1	16.1	16.2	15.6
Virginia ²	200.4	209.1	210.1	210.1	211.4	213.3	212.6	211.4	211.4	204.7	200.2	197.3	193.5	231.9
West Virginia ²	131.0	133.0	131.9	132.0	131.9	131.9	133.4	131.4	132.9	132.0	128.0	128.4	128.7	132.2
North Carolina ²	365.7	372.1	375.4	375.0	373.2	371.4	368.1	361.6	359.0	358.9	358.2	360.9	357.5	399.9
South Carolina ²	188.7	189.7	189.8	189.5	188.5	188.0	186.7	183.3	182.8	183.9	180.0	179.8	178.4	191.8
Georgia ²	249.7	253.9	254.0	255.9	257.9	261.8	265.7	263.9	263.1	259.5	253.4	247.1	245.7	302.9
Florida ²	76.6	81.9	86.8	88.1	90.6	90.4	89.4	79.6	77.1	74.3	73.9	76.8	77.9	136.0
East South Central:														
Kentucky ²	123.8	130.0	129.1	129.9	129.1	129.1	127.4	122.2	126.2	126.7	124.8	123.1	121.0	131.7
Tennessee ²	245.7	249.2	249.9	250.9	250.0	247.7	248.6	245.0	243.2	244.8	240.2	235.0	232.1	255.9
Alabama ²	228.8	224.0	224.3	225.0	224.7	222.9	221.6	215.2	212.0	210.3	208.3	202.4	201.3	258.5
Mississippi ²	88.5	90.4	92.1	93.5	92.7	91.5	90.5	87.3	87.2	87.1	83.7	83.4	81.4	95.1
West South Central:														
Arkansas ²	71.0	72.7	67.9	67.5	67.4	70.0	70.1	69.6	69.1	67.8	65.6	65.5	66.0	76.7
Louisiana ²	136.6	135.2	133.3	132.6	132.7	133.5	132.5	128.7	127.0	128.0	132.4	132.9	132.9	160.1
Oklahoma ²	53.0	54.1	54.3	54.6	54.7	55.4	55.6	52.6	52.2	54.7	52.5	52.8	51.8	99.7
Texas ²	324.5	325.9	324.8	326.2	324.8	329.8	328.9	315.9	312.0	315.7	308.3	305.1	299.8	424.8
Mountain:														
Montana ²	17.1	16.6	16.3	16.4	16.6	17.6	17.7	17.7	16.5	16.4	15.9	15.5	15.2	15.7
Idaho ²	19.2	18.4	18.4	17.7	17.9	20.1	21.9	21.6	23.2	23.0	22.2	20.8	19.5	15.9
Wyoming ²	6.0	5.9	5.8	5.8	5.8	6.7	7.0	6.7	5.9	6.1	6.0	5.7	5.3	5.1
Colorado ²	53.9	54.1	53.6	53.5	56.0	56.2	58.7	56.9	55.5	54.5	52.6	50.0	49.2	67.5
New Mexico ²	9.9	9.9	9.9	9.9	10.0	10.2	10.2	10.3	10.5	10.6	10.5	10.1	9.9	7.9
Arizona ²	13.1	13.6	*13.3	*13.3	*13.3	*13.9	*13.5	*12.7	*12.2	*11.9	*12.1	*11.1	*11.1	19.4
Utah ²	23.6	22.7	22.4	21.7	22.1	24.9	25.1	25.6	27.9	23.6	25.7	19.0	18.1	33.5
Nevada ²	3.7	3.7	*3.5	*3.5	*3.6	*3.5	*3.5	*3.4	*3.4	*3.4	*3.2	*3.0	*3.0	7.9
Pacific:														
Washington ²	164.9	160.9	*159.7	*159.7	*159.5	*160.9	*165.2	*174.1	*177.8	*175.6	*175.6	*170.8	*163.3	285.6
Oregon ²	117.1	115.5	114.4	115.2	116.1	118.4	118.4	122.2	127.4	126.5	121.2	118.2	111.8	192.1
California ²	691.6	698.7	691.7	693.6	696.9	705.9	705.4	725.5	738.8	740.8	700.8	665.1	655.4	1165.5

¹ Comparable series, January 1943 to date, available upon request to Regional Director, U. S. Department of Labor, or cooperating State agency.

² Address: Regional Director, U. S. Department of Labor, Boston 8, Mass.

³ Data secured in cooperation with:

Massachusetts—Department of Labor and Industries, State House, Boston 33.

Rhode Island—Department of Labor, Division of Census and Statistics, Providence 2.

Connecticut—Employment Security Division, Hartford 15.

New Jersey—Department of Labor, Trenton 8.

New York—Division of Research, Statistics and Publications, New York State Department of Labor, Albany 1.

Pennsylvania—Federal Reserve Bank of Philadelphia, 925 Chestnut St., Philadelphia 1.

Indiana—Employment Security Division, Indianapolis 12.

Illinois—Department of Labor, Division of Statistics and Research, Chicago 6.

Michigan—Department of Labor and Industry, Lansing 13.

Wisconsin—Industrial Commission of Wisconsin, Madison 3.

Minnesota—Division of Employment and Security, St. Paul 1.

Kansas—Kansas State Labor Department, Topeka.

Delaware—Federal Reserve Bank of Philadelphia, 925 Chestnut St., Philadelphia 1, Pa.

Maryland—Department of Labor and Industry, Baltimore 2.

Virginia—Division of Research and Statistics, State Department of Labor and Industry, Richmond 21.

North Carolina—North Carolina Department of Labor, Raleigh.

Florida—Florida Industrial Commission, Tallahassee.

Arkansas—Department of Labor, Little Rock.

Louisiana—Bureau of Business Research, College of Commerce,

Louisiana State University, Baton Rouge 3.

Oklahoma—Oklahoma Employment Security Commission, American

National Building, Oklahoma City 2.

Texas—Bureau of Business Research, University of Texas, Austin 12.

Montana—Unemployment Compensation Commission of Montana,

Helena.

Arizona—Employment Security Commission, P. O. Box 111, Phoenix.

Utah—Department of Employment Security, Salt Lake City 13.

Nevada—Employment Security Department, Carson City.

Washington—Office of Unemployment Compensation and Placement,

P. O. Box 367, Olympia.

California—Division of Labor Statistics and Research, San Francisco 2.

⁴ Address: Regional Director, U. S. Department of Labor, Cleveland 14,

Ohio.

⁵ Address: Regional Director, U. S. Department of Labor, Chicago 6, Ill.

⁶ Address: Regional Director, U. S. Department of Labor, Dallas 1, Tex.

⁷ Address: U. S. Department of Labor, Washington 25, D. C.

⁸ Address: Regional Director, U. S. Department of Labor, Atlanta 3, Ga.

⁹ Address: Regional Director, U. S. Department of Labor, Denver 2, Colo.

¹⁰ Address: Regional Director, U. S. Department of Labor, San Francisco

3, Calif.

* Data shown for the two most recent months are subject to revision without notation. Revised data for earlier months are identified by an asterisk.

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries¹

(In thousands)

Industry group and industry	1947						1946								Annual average	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	1939	
All manufacturing	12,397	12,343	12,524	12,614	12,593	12,511	12,514	12,449	12,253	12,244	12,101	11,767	11,623	14,560	8,190	
Durable goods	6,483	6,428	6,527	6,532	6,502	6,429	6,393	6,379	6,281	6,249	6,160	5,984	5,865	8,727	3,611	
Nondurable goods	5,914	5,915	5,997	6,082	6,091	6,082	6,121	6,070	5,972	5,995	5,941	5,783	5,758	5,834	4,579	
Durable goods																
Iron and steel and their products	1,557	1,565	1,567	1,567	1,562	1,552	1,521	1,535	1,500	1,514	1,490	1,445	1,403	1,761	991	
Blast furnaces, steel works, and rolling mills		491.1	496.5	482.3	483.3	479.7	467.0	481.5	473.5	480.1	480.0	469.5	453.1	516.7	388.6	
Gray-iron and semisteel castings		85.7	86.5	87.1	87.1	86.2	84.4	84.1	81.9	82.1	81.6	80.7	78.2	81.5	58.6	
Malleable-iron castings		25.9	25.6	25.7	25.4	25.1	24.2	24.8	24.4	24.4	24.1	23.6	23.7	26.5	18.6	
Steel castings		49.5	49.4	49.5	49.8	50.5	51.5	51.2	48.8	50.7	50.2	50.2	50.8	83.0	30.1	
Cast-iron pipe and fittings		20.5	19.9	20.2	20.1	19.8	19.2	19.4	19.1	18.7	16.9	18.3	16.2	16.7	16.1	
Tin cans and other tinware		41.8	41.9	41.1	41.3	41.6	41.5	41.3	42.2	44.8	44.4	43.4	41.9	32.4	31.4	
Wire drawn from purchased rods		25.5	29.9	29.7	30.2	30.5	29.9	29.9	29.2	29.8	29.1	28.7	28.6	36.0	22.2	
Wirework		39.2	41.4	42.3	39.7	41.9	40.5	40.9	41.3	41.3	39.5	36.5	34.3	32.8	30.1	
Cutlery and edge tools		25.6	27.0	27.9	27.9	27.8	27.7	27.3	25.8	25.9	25.7	25.4	25.5	21.8	15.1	
Tools (except edge tools, machine tools, files and saws)		24.7	26.6	27.0	26.7	26.7	26.8	26.4	26.8	26.4	25.6	24.3	25.3	27.8	15.1	
Hardware		50.1	50.4	50.9	50.6	50.1	49.6	49.5	48.3	47.4	45.9	44.8	45.1	45.3	35.1	
Plumbers' supplies		30.0	30.8	30.5	30.7	30.1	29.8	29.2	23.5	28.1	27.1	25.8	25.6	23.0	24.1	
Stoves, oil burners, and heating equipment not elsewhere classified		63.0	62.8	64.2	63.5	62.8	60.8	62.0	60.3	59.4	56.8	54.0	51.9	55.6	46.1	
Steam and hot-water heating apparatus and steam fittings		49.4	50.9	52.5	52.5	52.6	51.0	51.4	50.2	48.9	48.0	47.7	46.2	59.3	30.1	
Stamped and enameled ware and galvanizing		83.8	84.9	86.0	85.5	84.9	84.5	83.7	82.1	81.5	79.0	75.4	73.0	89.3	55.1	
Fabricated structural and ornamental metalwork		59.0	58.9	58.8	57.9	57.5	57.1	56.9	55.1	56.1	55.5	53.2	50.9	71.0	35.1	
Metal doors, sash, frames, molding, and trim		9.1	9.8	10.0	10.1	10.2	10.1	10.1	10.0	10.2	9.8	8.8	7.7	12.8	7.1	
Bolts, nuts, washers, and rivets		21.5	21.7	21.5	21.7	21.6	21.2	21.0	20.6	20.4	18.7	17.6	17.4	29.1	14.1	
Forgings, iron and steel		26.7	27.3	27.4	27.3	26.9	26.7	26.7	26.5	26.2	26.3	25.5	25.9	40.2	15.1	
Wrought pipe, welded and heavy-ripped		13.4	13.6	13.3	13.8	13.6	13.2	13.8	13.1	13.4	12.8	11.5	11.2	25.8	8.1	
Screw-machine products and wood screws		28.0	29.1	29.4	29.5	29.4	29.3	29.3	29.0	28.5	27.7	26.8	27.2	49.6	16.1	
Steel barrels, kegs, and drums		6.3	6.4	6.2	6.1	6.2	6.1	6.3	6.3	6.2	6.4	5.8	5.5	7.8	6.1	
Firearms		14.1	14.3	14.2	14.3	14.1	14.0	14.2	14.2	14.2	14.0	13.3	12.6	66.1	5.1	
Electrical machinery	574	554	567	599	601	598	597	590	579	563	545	526	521	741	259	
Electrical equipment		307.8	312.1	316.8	318.1	315.7	314.8	310.9	307.6	300.1	290.7	282.5	276.9	460.3	180.1	
Radios and phonographs		86.0	89.7	92.0	92.5	92.8	93.5	91.5	88.5	85.2	82.8	76.7	76.8	114.7	43.1	
Communication equipment		67.7	70.8	91.6	92.2	92.4	92.6	92.2	90.6	89.0	86.4	85.4	85.7	110.4	32.1	
Machinery, except electrical	1,185	1,194	1,197	1,189	1,181	1,173	1,161	1,150	1,131	1,112	1,092	1,066	1,049	1,293	529	
Machinery and machine-shop products		383.6	386.0	385.6	385.1	381.9	379.6	377.7	370.3	363.2	356.6	351.5	347.6	490.4	202.1	
Engines and turbines		44.4	44.9	45.6	45.5	45.4	45.6	45.6	44.8	45.3	44.9	43.5	40.8	68.8	18.1	
Tractors		55.1	55.0	54.7	55.0	54.8	54.5	53.7	53.7	52.0	52.8	52.4	49.3	52.4	31.1	
Agricultural machinery, excluding tractors		50.2	49.5	46.9	46.8	46.1	44.8	43.5	42.3	41.2	40.7	40.8	40.6	37.7	27.1	
Machine tools		55.1	57.2	58.0	59.0	59.8	60.6	60.3	62.0	62.0	61.3	59.2	59.3	109.7	36.1	
Machine-tool accessories		46.2	47.8	49.0	50.1	51.3	51.5	51.8	51.2	50.6	49.1	47.5	47.4	88.4	25.1	
Textile machinery		38.4	37.8	37.6	37.1	36.4	35.3	34.7	33.9	33.4	32.7	31.7	32.1	28.5	21.1	
Pumps and pumping equipment		59.0	59.6	59.8	59.4	58.8	58.9	58.3	57.4	57.5	56.9	54.6	54.7	76.8	24.1	
Typewriters		23.8	23.4	23.3	23.0	22.7	22.3	22.2	21.3	20.5	19.4	18.2	18.4	12.0	16.1	
Cash registers, adding and calculating machines		40.7	40.5	39.8	38.7	37.6	37.3	36.4	35.4	34.6	33.2	33.5	33.0	34.8	19.1	
Washing machines, wringers, and driers, domestic		14.5	14.2	13.8	13.3	12.7	12.5	12.6	12.0	11.9	11.5	10.3	10.7	13.3	7.1	
Sewing machines, domestic and industrial		11.6	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.1	9.7	9.8	9.5	10.7	7.1	
Refrigerators and refrigeration equipment		74.3	72.9	70.7	67.1	68.2	65.2	64.2	63.5	60.2	60.5	59.2	57.4	54.4	35.1	
Transportation equipment, except automobiles	463	468	477	471	472	474	473	464	457	455	468	476	479	2,508	159	
Locomotives		23.8	25.1	26.0	26.9	26.6	27.1	27.1	27.4	27.1	26.8	26.2	26.5	34.1	6.1	
Cars, electric and steam-railroad		55.1	55.6	54.0	53.5	51.2	50.8	50.3	48.5	47.9	46.6	45.5	42.8	60.5	24.1	
Aircraft and parts, excluding aircraft engines		138.8	142.5	141.2	141.9	143.9	144.7	146.3	143.2	139.5	134.2	128.6	125.5	794.9	39.1	
Aircraft engines		27.2	28.1	28.0	28.6	29.5	29.0	29.3	28.6	27.6	27.5	26.5	26.0	233.5	8.1	
Shipbuilding and boatbuilding		140.9	143.9	140.4	140.7	142.4	142.8	133.8	133.9	139.0	158.3	173.9	183.2	1225.2	69.1	
Motorcycles, bicycles, and parts		12.8	12.2	12.8	12.5	12.2	12.1	11.7	11.5	11.0	10.6	10.4	10.3	10.0	7.0	
Automobiles	789	749	807	798	791	755	774	778	774	788	755	725	693	714	402	
Nonferrous metals and their products	401	413	424	430	432	428	426	422	417	411	406	392	378	449	229	
Smelting and refining, primary, of nonferrous metals		40.3	40.8	41.0	41.0	40.2	40.2	39.3	38.6	37.5	36.9	35.4	29.7	56.4	27.1	
Alloying and rolling and drawing of nonferrous metals except aluminum		59.8	61.7	62.4	63.7	63.0	62.8	62.0	61.5	61.7	61.1	59.5	57.2	75.8	38.1	
Clocks and watches		27.6	28.0	28.1	28.5	28.3	28.2	28.5	28.2	27.8	27.5	26.1	26.7	25.2	20.1	
Jewelry (precious metals) and jewelers' findings		16.7	17.2	17.7	17.8	17.9	17.9	17.4	17.4	17.9	17.4	16.7	17.1	15.9	14.1	
Silverware and plated ware		15.8	15.8	15.8	15.8	15.6	15.2	15.1	14.7	14.6	14.2	13.7	13.9	11.8	12.1	
Lighting equipment		31.7	32.4	33.0	33.0	32.3	31.6	31.2	31.2	30.6	30.1	29.1	28.1	24.3	20.1	
Aluminum manufactures		46.2	48.9	50.6	50.8	51.1	51.3	50.9	50.6	49.7	49.4	48.6	47.6	79.4	23.1	
Sheet-metal work, not elsewhere classified		25.4	25.9	26.4	26.5	26.4	26.9	27.2	26.7	26.1	26.2	25.0	24.8	29.5	18.1	

See footnotes at end of table.

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries¹—Continued

[In thousands]

Industry group and industry	1947						1946								Annual averages	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	1939	
Durable goods—Continued																
Lumber and timber basic products.....	665	651	627	611	598	592	592	599	590	583	584	561	553	535	420	
Sawmills and logging camps ¹	525.3	502.8	488.5	477.0	477.0	471.1	472.8	479.5	473.8	468.5	472.5	454.1	447.2	435.8	313.7	
Planing and plywood mills ¹	125.3	124.1	122.7	121.1	121.1	120.7	119.3	119.1	116.6	114.3	111.6	107.1	106.2	99.2	79.1	
Furniture and finished lumber products.....	426	425	433	440	441	432	425	419	411	405	405	392	391	366	328	
Mattresses and bedsprings ¹	29.8	29.7	31.6	31.6	31.4	31.2	30.6	31.5	30.1	29.9	28.7	27.1	26.4	21.7	20.5	
Furniture ¹	226.4	229.8	233.6	235.1	230.1	227.2	223.5	220.0	216.5	217.3	211.1	209.8	200.0	177.9	177.9	
Wooden boxes, other than cigar ¹	36.2	36.5	35.9	35.2	35.1	34.3	34.2	33.6	33.3	33.4	32.5	32.3	32.3	28.3	28.3	
Caskets and other morticians' goods ¹	19.3	19.5	20.1	19.9	19.9	19.6	18.7	17.3	17.4	17.2	17.2	17.5	14.2	13.9	13.9	
Wood preserving ¹	18.2	18.2	17.8	*17.6	17.3	16.8	16.5	16.5	16.6	16.4	16.0	15.4	12.4	12.6	12.6	
Wood, turned and shaped ¹	30.4	33.4	33.8	34.4	32.7	31.9	30.7	30.3	30.1	30.2	28.8	29.9	26.4	24.6	24.6	
Stone, clay, and glass products.....	423	419	428	427	424	425	424	422	422	418	415	401	398	360	294	
Glass and glassware.....	103.5	104.2	103.4	101.7	104.1	103.8	104.2	105.4	104.3	103.7	100.1	101.3	88.0	69.8	69.8	
Glass products made from purchased glass.....	12.7	13.3	13.4	13.3	13.2	12.9	12.7	12.4	12.0	12.0	11.5	11.9	11.3	10.0	10.0	
Cement.....	24.3	29.2	28.8	28.9	28.9	29.1	28.7	28.6	28.9	29.1	28.2	27.3	24.0	23.8	23.8	
Brick, tile, and terra cotta.....	64.4	64.6	63.7	63.2	63.1	62.2	62.3	63.6	63.4	63.4	62.4	58.8	50.5	50.8	50.8	
Pottery and related products.....	50.1	50.3	50.3	50.4	49.6	49.4	48.6	48.2	48.0	47.2	45.6	45.4	43.2	33.1	33.1	
Gypsum.....	5.7	5.9	5.9	6.1	6.1	6.2	6.1	5.9	5.9	5.8	5.5	5.1	4.5	4.9	4.9	
Wall board, plaster (except gypsum), and mineral wool.....	11.0	10.7	10.8	11.0	11.1	11.1	11.0	10.8	10.8	10.9	8.8	10.5	11.1	8.1	8.1	
Lime.....	9.4	9.2	9.0	9.0	8.9	8.9	9.0	9.0	8.9	8.9	8.8	8.7	9.3	9.5	9.5	
Marble, granite, slate, and other products.....	16.3	17.8	17.7	17.4	16.9	17.3	17.2	17.2	17.4	17.3	16.9	16.6	12.5	18.5	18.5	
Abrasives.....	19.3	19.6	20.1	20.1	20.2	20.1	20.0	19.8	19.3	19.1	18.8	18.6	23.4	7.7	7.7	
Asbestos products.....	20.8	21.0	21.3	21.4	21.6	21.7	21.6	21.3	20.5	20.1	19.1	19.2	22.0	15.9	15.9	
Nondurable goods																
Textile-mill products and other fiber manufactures.....	1,179	1,197	1,223	1,242	1,247	1,242	1,242	1,230	1,215	1,204	1,189	1,175	1,191	1,237	1,144	
Cotton manufactures, except small wares.....	460.2	467.7	470.1	471.5	470.1	468.8	465.3	459.5	455.8	452.3	445.0	447.7	486.5	396.0	396.0	
Cotton smallwares.....	13.2	13.7	14.2	14.4	14.6	14.5	14.3	14.5	14.3	14.1	13.7	14.1	16.5	13.3	13.3	
Silk and rayon goods.....	91.9	94.0	95.2	95.4	95.7	95.6	94.8	93.8	93.0	92.6	90.9	91.8	95.8	119.8	119.8	
Woolen and worsted manufactures, except dyeing and finishing.....	148.1	153.3	158.1	162.1	163.0	164.4	162.2	160.5	159.7	155.8	155.0	160.1	166.9	149.2	149.2	
Hosiery.....	111.9	117.0	120.1	120.0	119.0	118.5	117.5	115.8	113.8	114.1	113.3	114.3	117.1	159.1	159.1	
Knitted cloth.....	9.2	9.7	10.3	10.4	10.5	10.9	11.2	11.2	11.2	11.2	11.1	11.2	11.8	10.9	10.9	
Knitted outer-wear and knitted gloves.....	25.7	27.4	29.4	30.1	30.4	31.7	31.5	30.8	30.4	29.7	30.0	31.3	32.3	28.1	28.1	
Knitted underwear.....	37.6	37.9	37.8	37.3	36.6	36.0	35.6	35.2	34.9	35.2	34.9	35.3	41.8	38.5	38.5	
Dyeing and finishing textiles, including woolen and worsted.....	64.6	65.4	66.3	66.4	66.0	65.0	64.8	64.1	64.1	63.8	63.0	63.7	67.9	66.9	66.9	
Carpets and rugs, wool.....	28.2	28.0	27.8	27.2	26.7	26.4	25.7	25.0	24.6	24.2	23.7	24.0	22.6	25.6	25.6	
Hats, fur-felt.....	11.0	10.3	11.9	12.0	12.0	11.9	11.7	11.5	11.3	9.0	10.7	11.0	10.0	14.6	14.6	
Jute goods, except felts.....	3.8	3.8	3.9	3.9	3.8	3.7	3.6	3.8	3.8	3.7	3.8	3.9	3.9	3.6	3.6	
Cordage and twine.....	14.1	14.5	14.7	15.0	15.0	15.4	15.2	15.4	15.2	14.9	14.4	15.3	16.9	12.1	12.1	
Apparel and other finished textile products.....	1,040	1,037	1,066	1,120	1,119	1,090	1,079	1,063	1,065	1,049	1,030	983	1,013	958	790	
Men's clothing, not elsewhere classified ¹	280.5	283.5	287.5	287.8	284.6	282.7	279.8	270.3	266.6	265.6	257.7	260.8	265.9	229.6	229.6	
Shirts, collars, and nightwear ¹	73.2	73.3	74.1	73.7	71.4	70.5	68.9	65.2	65.0	65.1	64.8	64.2	67.2	74.0	74.0	
Underwear and neckwear, men's ¹	17.4	18.0	18.1	18.5	18.3	18.8	18.6	18.5	17.8	16.9	15.9	16.6	16.3	17.0	17.0	
Work shirts ¹	14.8	15.7	16.5	16.8	16.3	15.9	15.4	15.0	15.2	14.8	15.0	15.2	18.5	14.1	14.1	
Women's clothing, not elsewhere classified ¹	389.3	407.5	442.3	439.4	421.8	414.4	408.8	417.9	415.0	402.1	371.1	399.1	345.3	286.2	286.2	
Corsets and allied garments ¹	17.6	17.6	17.5	17.0	*16.8	16.9	16.6	16.3	15.9	15.7	15.4	16.2	16.5	18.8	18.8	
Millinery ¹	20.1	22.0	26.2	26.0	24.2	22.5	20.2	24.3	24.6	23.7	21.1	19.8	23.3	25.5	25.5	
Handkerchiefs ¹	4.7	4.8	4.9	4.8	4.7	4.6	4.4	4.4	4.2	4.2	4.0	4.1	5.7	5.1	5.1	
Curtains, draperies, and bedspreads ¹	22.2	22.3	23.5	24.8	25.7	26.9	29.5	30.2	28.2	27.7	27.4	27.0	25.2	17.8	17.8	
Housefurnishings, other than curtains, etc. ¹	29.3	29.0	28.7	28.8	29.1	29.6	29.3	30.1	29.5	29.3	27.8	27.8	24.0	11.2	11.2	
Textile bags ¹	27.9	28.3	29.4	29.7	29.3	29.8	28.9	28.2	27.1	27.0	28.3	26.9	19.6	12.6	12.6	
Leather and leather products.....	346	345	358	363	364	362	357	355	358	356	357	360	340	347	347	
Leather ¹	45.9	46.3	46.0	46.3	45.8	45.4	43.3	44.0	44.4	44.3	44.0	45.5	46.5	50.0	50.0	
Boot and shoe cut stock and findings ¹	18.3	19.4	20.2	20.1	20.3	20.6	20.7	20.3	20.1	20.7	20.1	20.5	19.2	20.0	20.0	
Boots and shoes ¹	212.6	220.7	224.4	224.2	222.6	221.7	218.6	216.3	219.3	217.3	219.4	220.4	205.6	230.9	230.9	
Leather gloves and mittens ¹	12.0	12.3	12.7	12.8	13.1	13.7	13.9	14.0	13.9	14.0	14.2	14.3	15.4	10.0	10.0	
Trunks and suit cases ¹	12.1	13.2	13.6	13.7	13.9	14.7	14.8	15.0	14.6	14.8	14.4	14.0	13.7	8.3	8.3	
Food.....	1,114	1,077	1,068	1,055	1,059	1,098	1,139	1,141	1,091	1,175	1,184	1,119	1,033	1,056	855	
Slaughtering and meat packing.....	143.2	139.1	143.5	148.9	154.4	150.7	138.9	84.4	94.8	138.4	123.4	128.3	164.6	120.5	120.5	
Butter.....	25.0	23.8	22.8	22.4	22.1	23.5	24.4	24.9	25.1	26.2	26.4	26.1	21.8	17.9	17.9	
Condensed and evaporated milk.....	15.0	14.4	13.6	13.4	13.1	12.9	13.1	13.7	14.2	15.0	15.7	15.7	13.0	9.7	9.7	
Ice cream.....	20.1	18.5	17.1	16.4	16.1	16.4	16.8	17.6	18.9	20.2	20.9	19.8	14.9	15.7	15.7	
Flour.....	28.8	30.0	30.4	30.3	30.5	30.7	30.9	30.6	29.7	29.5	28.3	26.9	28.5	24.8	24.8	
Feeds, prepared.....	21.3	21.9	22.3	21.6	21.9	21.2	21.8	21.7	21.0	22.4	21.7	20.8	21.7	15.4	15.4	
Cereal preparations.....	9.3	10.3	9.8	9.8	10.2	10.8	11.0	10.8	10.9	10.1	9.5	9.9	9.9	7.5	7.5	
Baking.....	245.8	247.3	245.0	243.9	249.0	252.7	249.0	241.3	241.4	236.9	234.0	234.2	254.0	230.7	230.7	
Sugar refining, cane.....	15.8	15.3	14.4	13.2	14.6	14.9	12.5	11.5	12.3	14.0	14.2	14.2	13.9	14.2	14.2	
Sugar, beet.....	5.3	4.6	4.5	5.0	9.2	16.1	22.0	19.5	8.0	6.8	4.5	4.7	8.4	10.4	10.4	
Confectionery.....	54.6	56.7	56.4	55.4	56.9	58.6	57.1	55.8	52.2	48.7	46.0	47.2	56.1	49.7	49.7	
Beverages, nonalcoholic.....	25.0	23.8	22.7	22.4	22.5	23.1	23.2	23.0	24.1	25.6	25.7	24.9	27.1	21.3	21.3	
Malt liquors.....	55.6	54.1	52.8	52.4	52.7	53.7	53.3	53.0	54.2	52.4	52.0	50.9	45.6	36.1	36.1	
Canning and preserving.....	79.7	80.1	76.5	81.7	94.6	115.8	131.9	173.3	245.0	206.5	183.9	111.4	133.7	134.5	134.5	

See footnotes at end of table.

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries ¹—Continued

[In thousands]

Industry group and industry	1947						1946								Annual averages	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	1939	
Nondurable goods—Continued																
Tobacco manufactures.....	84	83	82	86	89	90	92	91	89	87	86	85	86	91	93	
Cigarettes.....	32.9	32.8	32.9	33.4	34.1	34.1	34.5	34.5	33.9	33.7	33.6	33.6	33.6	33.9	27.4	
Cigars.....	37.0	36.5	40.1	42.1	41.8	41.8	42.9	42.3	41.4	40.0	38.7	37.6	39.2	42.7	50.9	
Tobacco (chewing and smoking) and snuff.....	6.7	6.5	7.0	7.2	7.5	7.5	7.8	8.0	7.8	7.6	7.7	7.6	7.3	8.4	9.2	
Paper and allied products.....	381	381	385	387	387	386	387	383	376	372	369	365	368	324	265	
Paper and pulp.....	171.8	171.2	172.5	172.7	172.0	171.8	171.8	170.6	167.7	167.7	167.8	166.2	167.6	149.7	137.5	
Paper goods, other.....	47.1	47.4	47.7	47.8	47.5	47.9	47.9	48.0	47.2	46.6	46.2	45.5	46.4	47.8	37.6	
Envelopes.....	10.9	10.9	11.0	11.0	10.9	11.0	10.9	10.5	10.4	10.3	10.2	10.5	10.3	10.3	8.7	
Paper bags.....	14.9	15.5	15.6	15.8	16.0	15.8	15.8	15.4	15.1	14.7	14.0	14.1	14.3	12.4	11.1	
Paper boxes.....	86.5	89.7	90.8	90.9	91.3	92.6	91.8	89.6	87.4	87.2	85.6	86.6	83.3	69.2		
Printing, publishing, and allied industries..	423	422	422	421	420	417	420	415	410	401	399	397	393	331	328	
Newspapers and periodicals.....	140.9	139.6	138.5	137.2	135.2	136.7	136.7	135.0	133.9	131.7	131.1	130.1	129.9	113.0	118.7	
Printing, book and job.....	163.1	164.3	164.8	166.0	166.2	166.3	165.0	163.2	159.3	157.9	159.5	156.4	156.4	132.5	126.3	
Lithographing.....	30.4	30.4	30.4	30.5	30.2	30.5	30.3	29.9	29.5	29.1	28.8	28.7	25.2	26.0		
Bookbinding.....	34.5	34.4	34.2	33.9	33.7	34.1	33.6	33.0	31.8	32.0	31.2	31.4	29.4	25.8		
Chemicals and allied products.....	542	561	565	569	568	564	555	550	539	530	520	516	522	734	288	
Paints, varnishes, and colors.....	37.4	37.3	37.3	36.8	36.3	36.4	35.9	36.0	36.0	35.9	35.6	35.3	29.5	28.2		
Drugs, medicines, and insecticides.....	53.3	53.9	54.3	54.0	54.2	53.8	53.5	53.1	52.1	51.7	51.4	51.4	45.5	27.4		
Perfumes and cosmetics.....	9.3	9.7	10.3	10.7	10.9	11.5	12.4	12.6	12.2	12.6	12.6	12.1	11.5	10.4		
Soap.....	15.2	15.3	15.4	15.1	14.5	14.3	13.8	13.7	14.2	14.1	14.0	14.1	13.3	13.6		
Rayon and allied products.....	58.5	58.3	58.4	59.1	58.9	58.6	58.9	57.8	57.4	57.3	57.0	58.4	52.1	48.3		
Chemicals, not elsewhere classified.....	125.4	125.3	124.6	124.2	124.3	122.9	120.5	118.1	116.6	117.2	117.2	117.5	116.7	69.6		
Explosives and safety fuses.....	13.9	13.9	13.9	13.7	13.4	12.9	12.7	12.9	12.8	12.6	12.3	12.2	90.5	7.3		
Compressed and liquefied gases.....		6.0	5.9	6.0	5.9	5.7	5.8	5.3	5.7	5.9	5.8	5.8	6.3	4.0		
Ammunition, small-arms.....	6.1	6.7	6.7	6.6	6.6	6.6	6.8	6.9	7.4	4.9	7.6	7.6	154.1	4.3		
Fireworks.....	2.9	2.8	2.6	2.7	3.0	3.5	3.5	3.4	3.2	2.9	2.8	3.3	28.2	1.2		
Cottonseed oil.....	11.0	13.0	15.0	16.5	17.3	18.9	20.5	17.5	13.0	10.8	8.4	9.0	17.7	15.2		
Fertilizers.....	25.6	27.4	28.8	27.9	25.6	23.1	22.1	22.0	22.3	20.9	19.3	20.1	22.7	18.8		
Products of petroleum and coal.....	160	158	154	155	155	154	155	155	155	157	156	155	153	125	106	
Petroleum refining.....	100.5	97.6	98.7	98.5	98.3	99.4	99.4	99.1	99.2	99.8	100.1	100.1	99.1	80.6	72.8	
Coke and byproducts.....	26.3	25.9	25.8	26.1	25.6	25.0	25.7	25.8	25.9	25.8	25.6	24.7	24.6	21.7		
Paving materials.....	1.9	1.9	1.8	1.7	1.6	1.6	1.8	2.0	2.3	2.2	2.1	2.1	1.6	2.4		
Roofing materials.....	12.5	12.3	12.1	12.3	12.4	12.5	12.7	12.6	12.6	12.2	12.0	11.8	9.6	8.0		
Rubber products.....	218	223	234	238	240	240	242	240	236	229	223	214	221	194	121	
Rubber tires and inner tubes.....	102.2	105.6	107.8	108.9	110.1	111.7	112.0	110.4	106.6	102.8	99.1	106.0	86.7	54.1		
Rubber boots and shoes.....	19.2	20.0	20.2	20.3	19.9	19.7	19.2	18.4	18.1	18.0	17.5	18.1	21.8	14.8		
Rubber goods, other.....	68.8	74.2	75.2	76.4	76.6	77.0	76.2	74.8	73.3	72.1	69.3	68.5	73.1	51.8		
Miscellaneous industries.....	427	431	440	446	443	439	448	445	441	433	429	417	418	445	244	
Instruments (professional and scientific), and fire-control equipment.....	19.4	19.9	20.0	20.1	20.1	20.4	19.4	20.6	20.9	21.2	21.2	21.2	21.7	71.2	11.1	
Photographic apparatus.....	25.8	25.5	25.4	25.3	25.3	25.4	25.4	25.3	25.3	25.6	25.2	24.5	29.2	17.3		
Optical instruments and ophthalmic goods.....	20.6	20.9	21.3	21.6	21.8	21.9	21.6	21.5	21.2	21.2	21.1	21.3	27.3	11.6		
Pianos, organs, and parts.....	10.6	10.6	10.8	10.6	10.4	9.5	9.9	9.7	9.4	9.4	9.1	9.0	10.0	7.6		
Games, toys, and dolls.....	23.7	23.8	23.1	21.9	21.3	24.2	25.2	24.3	23.6	22.8	20.8	20.9	15.6	18.7		
Buttons.....	8.6	9.1	9.4	9.6	10.1	10.5	10.2	10.6	10.6	10.6	10.1	10.3	10.8	11.0		
Fire extinguishers.....	2.0	2.1	2.2	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	7.6	1.0		

¹ Data for May 1947 are based on reports from 33,300 cooperating establishments covering 7,271,000 production and related workers. Major industry groups have been adjusted to levels indicated by final 1945 data made available by the Bureau of Employment Security of the Federal Security Agency. The Bureau has not prepared estimates for certain industries, and with the exception of the industries, in the major industry groups indicated below, estimates for individual industries have been adjusted only to levels indicated by the 1939 Census of Manufactures but not to Federal Security Agency data. For these reasons the sums of the individual industry estimates may not

agree with the totals shown for the major industry groups. Data shown for the two most recent months are subject to revision without notation. Revised data for earlier months are identified by an asterisk.

² These data have been adjusted to levels indicated by final 1945 data made available by the Bureau of Employment Security of the Federal Security Agency. Comparable series from January 1939 available upon request. Data for individual industries comprising the major industry group indicated below supersede data shown in releases dated prior to:

Group	Mimeo-graphed release	Monthly Labor Review
Apparel and other finished textile products.....	May 1947	June 1947
Furniture and finished lumber products.....	June 1947	July 1947
Lumber and timber basic products.....	July 1947	Aug. 1947
Leather and leather products.....	July 1947	Aug. 1947

*Revised.

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹

[1939 average=100]

Industry group and industry	1947						1946						Annual average	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
All manufacturing	151.3	150.7	152.9	154.0	153.7	152.7	152.8	152.0	149.6	149.5	147.7	143.6	141.9	177.7
Durable goods	179.5	178.0	180.7	180.9	180.1	178.0	177.0	176.7	173.9	173.1	170.6	165.7	162.4	241.7
Nondurable goods	129.1	129.1	130.9	132.8	133.0	132.8	133.6	132.5	130.4	130.9	129.7	126.2	125.7	127.4
Durable goods														
Iron and steel and their products	157.1	156.8	158.0	158.1	157.5	156.5	153.4	154.9	151.2	152.7	150.2	145.7	141.5	177.6
Blast furnaces, steel works, and rolling mills		126.4	125.3	124.2	124.4	123.5	120.2	124.0	121.9	123.6	123.6	120.9	116.6	133.0
Gray-iron and semisteel castings		146.7	148.1	149.1	149.1	147.4	144.5	144.0	140.2	140.5	139.6	138.1	133.9	139.4
Malleable-iron castings		143.6	142.1	142.3	141.1	139.2	134.1	137.5	135.5	135.1	133.6	131.0	131.4	146.8
Steel castings		164.4	164.3	164.4	165.4	167.7	171.3	170.3	162.0	168.5	166.9	167.0	169.0	275.8
Cast-iron pipe and fittings		124.2	120.5	122.4	121.8	120.0	116.2	117.6	115.7	113.4	102.2	110.5	97.8	100.8
Tin cans and other tinware		131.7	132.0	129.4	130.1	131.0	130.5	129.9	132.9	141.1	139.9	136.6	132.0	162.0
Wire drawn from purchased rods		115.9	136.7	135.0	137.3	138.8	135.9	136.3	132.7	135.7	132.3	130.5	130.1	163.8
Wirework		129.0	136.4	139.3	130.6	137.7	133.4	134.6	135.9	136.0	130.1	120.2	112.7	108.0
Cutlery and edge tools		165.8	175.2	180.8	180.7	180.5	179.8	177.3	167.4	167.7	166.5	164.8	165.5	141.3
Tools (except edge tools, machine tools, files, and saws)		161.6	174.0	176.2	174.6	174.1	175.0	172.4	174.9	172.2	167.2	158.6	165.0	181.5
Hardware		140.5	141.3	142.8	141.9	140.4	139.0	139.0	135.5	133.0	128.7	125.7	126.6	127.1
Plumbers' supplies		121.8	124.9	123.8	124.7	122.2	120.8	118.6	95.4	113.9	110.0	104.8	104.1	93.5
Stoves, oil burners, and heating equipment not elsewhere classified		136.6	136.1	139.3	137.6	136.2	131.7	134.4	130.8	128.8	123.0	117.0	112.6	120.6
Steam and hot-water heating apparatus and steam fittings		162.9	168.1	173.1	173.2	173.5	168.3	169.7	165.7	161.3	158.2	157.3	152.4	195.6
Stamped and enameled ware and galvanizing		150.8	152.8	154.9	153.9	152.9	152.2	150.7	147.7	146.7	142.2	135.8	131.4	160.5
Fabricated structural and ornamental metal-work		166.1	165.9	165.6	162.9	162.0	160.8	160.3	155.2	157.9	156.1	149.8	143.4	200.0
Metal doors, sash, frames, molding, and trim		117.1	126.8	129.7	130.7	131.3	130.2	131.0	129.2	131.3	126.7	114.1	99.9	164.9
Bolts, nuts, washers, and rivets		150.0	151.4	150.6	151.5	150.7	148.3	147.1	143.8	142.9	130.6	122.9	121.9	203.1
Forgings, iron and steel		174.0	177.7	178.3	177.8	175.0	173.9	173.9	172.1	170.1	170.9	165.9	168.6	261.3
Wrought pipe, welded and heavy-ri-eted		160.3	162.4	158.8	165.2	161.9	158.0	164.8	156.3	159.9	153.4	137.0	134.0	308.4
Screw-machine products and wood screws		165.6	171.9	173.6	174.5	173.9	173.0	173.2	171.6	168.3	163.9	158.5	160.5	292.9
Steel barrels, kegs, and drums		104.1	104.6	101.4	99.7	102.9	100.1	103.8	104.0	102.7	106.0	95.6	90.4	129.1
Firearms		281.1	285.3	283.7	286.6	282.8	280.6	284.0	284.3	284.1	281.0	266.9	252.7	1321.8
Electrical machinery	221.5	213.8	218.7	231.3	232.0	230.8	230.6	227.6	223.4	217.3	210.5	203.2	201.2	285.9
Electrical equipment		170.3	172.7	175.3	176.0	174.6	174.1	172.0	170.1	166.0	160.8	156.3	153.2	254.6
Radios and phonographs		197.6	206.1	211.5	212.7	213.3	215.0	210.2	203.4	195.7	190.3	176.2	176.6	293.7
Communication equipment		210.7	220.3	285.2	287.0	287.6	288.4	287.0	282.0	277.0	269.0	265.9	266.9	343.6
Machinery, except electrical	224.2	225.9	226.6	225.1	223.5	222.0	219.6	217.7	214.0	210.3	206.6	201.8	198.6	244.7
Machinery and machine-shop products		189.6	190.8	190.6	190.3	188.8	187.6	186.7	183.0	179.5	176.2	173.7	171.8	242.4
Engines and turbines		238.3	240.6	244.4	243.8	243.5	244.5	244.5	240.1	242.6	240.9	233.1	218.5	368.6
Tractors		176.1	176.0	174.8	175.9	175.2	174.2	171.6	171.8	166.4	168.7	167.5	157.6	167.5
Agricultural machinery, excluding tractors		180.6	177.9	168.6	168.4	165.7	161.0	156.3	152.1	148.1	146.4	146.8	146.1	135.7
Machine tools		150.5	156.1	158.4	161.1	163.2	165.3	164.6	169.2	169.2	167.5	161.5	161.9	290.5
Machine-tool accessories		183.4	190.0	194.8	199.2	204.0	204.8	205.9	203.6	201.0	195.3	188.7	188.5	351.3
Textile machinery		175.3	172.6	171.7	169.5	166.2	161.4	158.5	154.7	152.3	149.2	144.7	146.5	130.1
Pumps and pumping equipment		243.3	245.8	246.6	245.1	242.7	243.1	240.6	237.0	237.1	234.6	225.2	225.5	317.0
Typewriters		146.7	144.4	144.0	142.0	139.8	137.2	137.2	131.6	126.6	119.5	112.2	113.7	73.8
Cash registers, adding and calculating machines		206.9	205.7	202.4	196.8	191.2	189.3	185.2	179.9	175.8	168.9	170.0	167.9	177.0
Washing machines, wringers and driers, domestic		193.8	190.0	184.5	178.4	169.6	166.8	168.2	160.3	158.7	153.8	137.8	144.0	178.8
Sewing machines, domestic and industrial		147.6	146.7	144.5	142.1	138.6	136.2	133.6	130.8	128.3	123.2	124.8	121.2	136.6
Refrigerators and refrigeration equipment		211.4	207.4	201.0	190.8	194.1	185.6	182.6	180.6	171.2	172.1	168.4	163.3	154.9
Transportation equipment, except automobiles	291.8	294.8	300.8	296.7	297.6	298.4	298.2	292.4	287.8	286.8	294.7	299.9	301.6	1580.1
Locomotives		367.4	388.0	402.3	416.3	410.9	418.8	419.4	423.6	419.4	414.0	405.1	409.1	526.8
Cars, electric- and steam-railroad		224.8	226.6	220.3	218.2	208.6	207.2	205.2	197.6	195.4	190.1	185.7	174.3	246.5
Aircraft and parts, excluding aircraft engines		349.9	359.2	355.8	357.6	362.8	364.8	368.8	360.9	351.6	338.3	324.2	316.3	2003.5
Aircraft engines		306.2	315.8	314.9	321.8	331.4	326.2	329.8	321.8	310.5	309.3	298.3	292.3	2625.7
Shipbuilding and boatbuilding		203.5	207.8	202.8	203.3	205.7	206.2	193.2	193.3	200.8	228.6	251.2	264.6	1769.4
Motorcycles, bicycles, and parts		183.6	184.0	184.0	179.4	175.1	173.6	168.1	165.0	158.0	152.7	148.6	147.1	143.7
Automobiles	196.2	186.2	200.5	198.2	196.6	187.7	192.3	193.3	192.3	196.0	187.8	180.2	172.3	177.5
Nonferrous metals and their products	175.1	180.1	184.8	187.5	188.5	186.9	185.8	184.0	182.0	179.5	177.3	171.2	164.9	196.0
Smelting and refining, primary, of nonferrous metals		146.0	147.8	148.2	148.5	145.5	145.4	142.1	139.9	135.6	133.6	128.2	107.5	204.3
Alloying and rolling and drawing of nonferrous metals except aluminum		154.0	158.8	160.7	164.0	162.2	161.7	159.7	158.4	159.0	157.4	153.2	147.3	195.2
Clocks and watches		135.9	138.0	138.5	140.7	139.3	139.1	140.5	138.8	136.8	135.5	128.5	131.6	124.2
Jewelry (precious metals) and jewelers' findings		115.8	118.9	122.8	123.5	124.0	123.9	120.3	120.8	123.8	120.6	115.5	118.7	110.5
Silverware and plated ware		130.6	130.2	130.5	129.8	128.5	125.5	124.5	121.6	120.0	117.2	112.6	114.3	96.9
Lighting equipment		154.7	158.0	161.0	161.0	157.9	154.4	152.5	152.3	149.2	146.8	142.1	137.0	118.9
Aluminum manufactures		196.1	207.8	214.9	215.6	217.2	217.7	216.3	214.9	211.0	209.6	206.4	202.4	337.4
Sheet-metal work, not elsewhere classified		135.5	138.2	140.9	141.2	140.8	143.7	145.2	142.2	139.3	139.5	133.1	132.1	167.2
Lumber and timber basic products	158.2	154.8	149.1	145.4	142.3	140.9	140.8	142.4	140.4	138.6	139.0	133.5	131.6	127.3
Sawmills and logging camps		167.5	160.3	155.7	152.1	150.2	150.7	152.9	151.0	149.4	150.7	144.8	142.6	139.0
Planing and plywood mills		158.4	156.9	155.1	153.1	152.6	150.9	150.5	147.4	144.4	141.1	135.3	134.3	122.4

See footnotes at end of table.

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹—Con.

[1939 average=100]

Industry group and industry	1947						1946						Annual average 1943	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
Durable goods—Continued														
Furniture and finished lumber products.....	129.8	129.5	132.1	134.2	134.5	131.8	129.6	127.7	125.2	123.5	123.4	119.6	119.1	111.7
Mattresses and bedsprings ¹	145.2	144.8	144.8	154.4	153.2	152.3	149.3	153.6	146.7	145.6	140.2	132.3	128.9	105.9
Furniture ²	127.2	129.1	131.3	132.1	129.3	127.7	125.6	123.7	121.7	122.2	118.7	117.9	112.4	112.4
Wooden boxes, other than cigar ³	127.7	128.9	126.6	124.1	123.8	121.1	120.7	118.8	117.6	118.0	114.5	113.9	113.9	125.0
Caskets and other morticians' goods ⁴	138.8	140.4	144.3	143.0	142.8	141.0	134.7	124.7	124.9	123.7	123.5	125.8	102.4	102.4
Wood preserving ⁵	144.7	144.5	142.1	143.3	140.4	134.0	131.6	131.6	131.9	130.5	127.2	122.4	98.7	98.7
Wood, turned and shaped ⁶	123.6	135.8	137.5	140.0	133.0	129.9	124.9	123.1	122.4	123.0	117.3	121.5	107.4	107.4
Stone, clay, and glass products.....	144.0	142.6	146.0	145.3	144.5	144.9	144.4	143.9	143.8	142.5	141.6	136.6	135.6	122.5
Glass and glassware.....	148.2	149.3	148.2	145.7	149.1	148.6	149.3	150.9	149.4	148.5	143.4	145.2	126.0	126.0
Glass products made from purchased glass.....	127.1	132.5	133.9	133.2	132.0	129.3	127.1	123.7	119.7	119.8	114.8	118.8	113.1	113.1
Cement.....	102.1	122.6	120.8	121.2	121.5	122.2	120.6	120.2	121.5	122.0	118.2	114.7	100.7	100.7
Brick, tile, and terra cotta.....	113.4	113.8	112.2	111.3	111.2	109.6	109.7	112.1	111.7	111.7	109.9	103.6	88.9	88.9
Pottery and related products.....	151.4	151.8	152.1	152.2	149.9	149.1	140.8	145.5	145.1	142.6	137.9	137.0	130.6	130.6
Gypsum.....	114.7	119.2	118.8	122.8	123.8	124.8	124.1	119.6	119.7	117.6	111.4	104.2	91.2	91.2
Wallboard, plaster (except gypsum), and mineral wool.....	135.4	132.4	133.4	136.2	136.2	137.1	135.6	133.0	132.9	134.9	108.6	128.9	137.3	137.3
Lime.....	98.9	97.3	95.1	95.1	94.2	93.6	95.2	94.7	94.1	93.7	93.1	91.5	98.7	98.7
Marble, granite, slate, and other products.....	88.2	95.9	95.4	94.0	91.3	93.6	93.2	92.8	94.1	93.4	91.2	89.6	67.4	67.4
Abrasives.....	249.4	252.9	259.4	259.9	261.8	260.0	259.0	256.2	249.7	246.5	243.4	241.0	302.2	302.2
Asbestos products.....	130.7	132.1	134.2	134.8	136.1	136.4	136.0	134.1	129.0	126.3	120.2	120.6	138.2	138.2
Nondurable goods														
Textile-mill products and other fiber manufactures.....	103.1	104.6	106.9	108.6	109.1	108.6	108.6	107.6	106.2	105.2	104.0	102.8	104.1	108.2
Cotton manufactures, except smallwares.....	116.2	118.1	118.7	119.1	118.7	118.4	117.5	116.0	115.1	114.2	112.4	113.0	122.9	122.9
Cotton smallwares.....	98.8	120.8	106.4	108.4	110.0	109.0	107.5	108.8	107.5	105.8	103.0	105.9	123.6	123.6
Silk and rayon goods.....	76.7	78.4	79.5	79.6	79.9	79.8	79.1	78.3	77.6	77.2	75.9	76.6	79.9	79.9
Woolen and worsted manufactures, except dyeing and finishing.....	99.2	102.7	105.9	108.6	109.2	110.2	108.7	107.5	107.0	104.4	103.9	107.3	111.9	111.9
Hosiery.....	70.4	73.6	75.5	75.5	74.8	74.5	73.9	72.8	71.6	71.7	71.2	71.9	73.6	73.6
Knitted cloth.....	84.6	89.1	94.4	95.3	95.7	99.6	102.9	102.3	102.2	102.4	101.2	102.5	107.7	107.7
Knitted outer-wear and knitted gloves.....	91.3	97.5	104.4	107.0	108.0	112.7	112.0	109.6	108.0	105.8	106.8	111.2	115.0	115.0
Knitted underwear.....	97.4	98.4	98.2	96.7	94.9	93.4	92.4	91.3	90.6	91.2	90.6	91.6	108.6	108.6
Dyeing and finishing textiles, including woolen and worsted.....	96.7	97.8	99.2	99.3	98.7	97.2	96.9	95.9	95.9	95.4	94.2	95.2	101.6	101.6
Carpets and rugs, wool.....	110.3	109.5	108.8	106.3	104.4	103.1	100.3	97.9	96.1	94.7	92.7	93.7	88.3	88.3
Hats, fur-felt.....	75.3	70.7	81.7	82.2	82.5	81.7	80.6	79.1	78.0	61.8	73.7	75.7	68.9	68.9
Jute goods, except felts.....	106.8	106.1	108.0	107.8	105.2	102.3	101.2	106.4	105.7	103.7	104.8	108.1	107.5	107.5
Cordage and twine.....	116.4	119.8	121.6	123.7	124.0	127.2	125.8	127.2	125.5	122.8	118.8	126.5	139.3	139.3
Apparel and other finished textile products.....	131.7	131.4	135.0	141.9	141.7	138.0	136.6	134.6	134.9	132.9	130.5	124.5	128.3	121.4
Men's clothing, not elsewhere classified ¹	122.2	123.5	125.2	125.3	123.9	123.1	121.8	121.3	116.1	115.7	112.2	113.6	115.8	115.8
Shirts, collars, and nightwear ²	98.9	99.1	100.2	99.6	96.5	95.3	93.1	88.2	87.9	88.1	87.7	86.7	90.9	90.9
Underwear and neckwear, men's ³	102.4	105.9	107.0	108.8	107.9	111.1	109.6	109.0	105.1	99.5	93.8	97.8	96.3	96.3
Work shirts ⁴	104.8	111.0	116.9	118.7	115.6	112.8	108.7	106.4	107.8	104.9	106.2	107.4	131.3	131.3
Women's clothing, not elsewhere classified ⁵	136.0	142.4	154.5	153.5	147.4	144.8	142.1	146.0	145.0	140.5	129.6	139.4	120.6	120.6
Corsets and allied garments ⁶	93.8	93.9	93.1	90.5	89.7	90.1	88.2	86.8	84.6	83.8	82.2	86.1	88.1	88.1
Millinery ⁷	78.9	86.4	102.6	101.9	95.0	88.2	79.2	95.1	96.6	92.7	82.9	77.6	91.5	91.5
Handkerchiefs ⁸	93.1	94.8	96.4	95.2	91.6	91.1	87.1	86.6	82.9	82.1	78.0	81.1	113.1	113.1
Curtains, draperies, and bedspreads ⁹	124.7	125.7	132.5	139.5	144.6	151.6	166.2	169.8	158.9	155.9	154.3	152.1	141.9	141.9
Housefurnishings, other than curtains, etc. ¹⁰	262.0	259.4	257.0	257.0	260.2	265.4	262.6	269.3	264.0	262.1	248.9	249.3	214.9	214.9
Textile bags ¹¹	221.0	224.3	233.4	235.4	232.7	236.1	228.9	223.9	214.9	214.1	224.6	212.9	155.7	155.7
Leather and leather products.....	99.8	99.4	103.0	104.7	104.9	104.4	104.4	102.9	102.2	103.1	102.7	103.0	103.8	91.8
Leather ¹	91.6	92.6	92.0	92.6	91.6	90.7	86.6	87.9	88.8	88.5	87.9	91.0	92.9	92.9
Boot and shoe cut stock and findings ²	91.7	97.3	101.3	100.8	101.8	103.0	103.6	101.5	100.8	103.5	100.9	102.7	96.0	96.0
Boots and shoes ³	92.1	95.6	97.2	97.1	96.4	96.0	94.7	93.7	95.0	94.1	95.0	95.4	89.0	89.0
Leather gloves and mittens ⁴	120.3	123.2	126.8	128.3	130.8	137.1	139.5	140.0	139.2	140.4	141.7	143.1	153.7	153.7
Trunks and suitcases ⁵	145.8	158.6	163.9	164.7	166.5	176.7	178.1	179.9	175.0	177.9	173.0	168.2	161.2	161.2
Food.....	130.3	126.0	125.0	123.5	123.9	128.4	133.3	133.5	127.7	137.5	138.6	131.0	120.9	123.5
Slaughtering and meat packing.....	118.8	115.4	119.1	123.5	128.1	125.0	115.3	70.0	78.6	114.8	102.4	106.5	136.6	136.6
Butter.....	139.1	132.5	127.2	124.7	123.1	130.6	136.1	138.5	139.8	145.8	146.9	145.6	121.3	121.3
Condensed and evaporated milk.....	154.5	148.2	140.4	137.9	134.6	132.5	135.4	140.7	146.6	154.9	162.1	162.1	134.2	134.2
Ice cream.....	127.8	117.9	108.7	104.4	102.3	104.4	107.2	111.9	120.2	128.8	132.7	126.3	95.0	95.0
Flour.....	116.1	121.3	122.5	122.5	123.2	123.9	124.8	123.5	119.9	118.9	114.3	108.7	115.2	115.2
Feeds, prepared.....	138.5	142.1	144.8	140.4	142.1	137.6	141.5	140.7	136.2	145.7	140.6	135.0	141.0	141.0
Cereal preparations.....	124.4	137.5	131.9	131.9	137.0	145.0	147.0	145.1	146.0	134.8	127.4	133.2	132.4	132.4
Baking.....	106.5	107.2	106.2	105.7	107.9	109.6	107.9	104.6	104.6	102.7	101.4	101.5	110.1	110.1
Sugar refining, cane.....	111.6	108.0	101.6	93.0	103.2	105.2	88.4	81.4	86.9	98.8	100.0	100.5	98.2	98.2
Sugar, beet.....	50.8	44.0	43.0	48.2	88.0	154.8	211.1	187.0	76.9	65.6	43.6	45.2	80.3	80.3
Confectionery.....	109.9	114.1	113.3	111.4	114.3	117.9	114.9	112.1	104.9	98.0	92.5	94.8	112.8	112.8
Beverages, nonalcoholic.....	117.4	112.0	106.7	105.4	106.0	108.5	109.2	108.3	113.2	120.6	120.8	117.1	127.4	127.4
Malt liquors.....	154.2	149.9	146.4	145.2	145.9	148.8	147.6	146.7	150.2	145.2	144.0	141.1	126.3	126.3
Canning and preserving.....	59.3	50.6	56.9	60.8	70.3	86.2	98.1	128.9	182.2	153.5	136.8	82.8	99.5	99.5
Tobacco manufactures.....	90.2	88.4	87.5	92.2	95.4	96.1	98.3	97.6	95.8	93.5	91.7	90.7	92.1	97.2
Cigarettes.....	119.8	119.8	119.9	121.9	124.2	125.9	125.7	123.7	122.9	122.6	122.5	122.6	123.8	123.8
Cigars.....	72.7	71.8	78.9	82.8	82.1	84.3	83.0	81						

See footnotes at end of table.

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹—Con.

[1939 average=100]

Industry group and industry	1947						1946								Annual average
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	
Nondurable goods—Continued															
Paper and allied products.....	143.6	143.7	145.0	145.9	145.9	145.6	145.7	144.3	141.7	140.0	139.2	137.4	138.8	122.2	
Paper and pulp.....		125.0	124.6	125.5	125.7	125.2	125.0	124.1	122.0	122.0	122.1	120.9	121.9	108.9	
Paper goods, other.....		125.2	126.1	126.7	126.9	126.2	127.4	127.6	125.5	123.8	122.7	120.8	123.4	127.1	
Envelopes.....		125.8	125.9	126.3	126.4	125.9	126.7	125.0	121.3	119.3	118.1	116.8	120.4	119.0	
Paper bags.....		134.3	139.5	140.8	142.6	144.7	142.4	139.1	136.4	132.3	126.3	127.5	128.9	112.0	
Paper boxes.....		125.1	129.7	131.3	131.4	132.0	133.9	132.7	129.5	126.3	126.1	123.8	125.2	120.5	
Printing, publishing, and allied industries.....	129.1	128.7	128.6	128.2	128.1	127.2	127.9	126.6	125.0	122.3	121.6	121.1	119.9	100.8	
Newspapers and periodicals.....		118.7	117.6	116.7	115.6	114.0	115.2	113.7	112.8	111.0	110.4	109.6	109.4	95.2	
Printing, book and job.....		129.1	130.1	130.4	131.4	131.5	131.6	130.6	129.2	126.1	125.0	126.3	123.8	104.9	
Lithographing.....		116.9	116.8	117.1	117.3	116.2	117.3	116.5	115.1	113.6	112.0	110.8	110.2	96.8	
Bookbinding.....		133.9	133.4	132.6	131.6	130.9	132.3	130.5	128.0	123.2	124.0	121.0	121.8	114.0	
Chemicals and allied products.....	187.9	194.8	196.2	197.5	197.1	195.6	192.5	190.9	187.2	184.0	180.5	178.9	181.3	254.5	
Paints, varnishes, and colors.....		132.9	132.7	132.4	130.6	129.0	129.2	127.7	127.9	127.8	127.6	126.6	125.3	104.8	
Drugs, medicines, and insecticides.....		194.4	196.7	198.2	196.9	197.9	196.4	195.4	193.8	190.0	188.7	187.5	187.5	166.1	
Perfumes and cosmetics.....		89.3	93.5	99.7	103.3	105.6	110.8	120.0	121.8	118.0	121.4	121.4	116.8	110.5	
Soap.....		112.2	112.4	113.2	111.2	107.1	105.5	101.3	100.8	104.5	103.8	103.2	103.5	98.0	
Rayon and allied products.....		121.3	120.8	121.0	122.3	122.0	121.3	121.9	119.8	118.8	118.7	118.0	121.0	107.9	
Chemicals, not elsewhere classified.....		180.3	180.1	179.1	178.6	178.6	176.7	173.3	169.8	167.6	168.5	168.4	169.0	167.7	
Explosives and safety fuses.....		191.8	192.1	191.0	188.3	184.9	177.4	174.6	178.2	176.9	173.1	169.8	168.7	1248.4	
Compressed and liquefied gases.....		154.7	152.6	149.7	151.1	147.9	144.0	146.0	133.6	143.7	148.1	145.9	146.2	160.2	
Ammunition, small arms.....		161.7	157.6	156.0	155.4	155.9	155.8	159.8	160.9	174.1	115.6	178.0	178.0	3614.0	
Fireworks.....		252.5	243.8	228.5	231.0	258.9	298.7	305.9	290.2	272.5	254.7	244.4	282.9	2434.9	
Cottonseed oil.....		72.3	85.3	99.0	108.3	114.1	124.4	134.7	115.3	85.6	71.0	55.6	59.4	116.7	
Fertilizers.....		136.3	146.2	153.4	148.8	136.6	122.8	117.7	117.1	118.7	111.5	102.7	107.2	120.9	
Products of petroleum and coal.....	150.8	149.3	145.4	145.9	146.0	145.4	146.1	146.6	146.8	147.8	147.4	146.7	144.5	117.6	
Petroleum refining.....		138.0	134.1	135.4	135.2	135.0	136.4	136.0	136.2	137.0	137.4	137.4	136.1	110.6	
Coke and byproducts.....		121.4	119.2	119.1	120.2	117.9	115.3	118.3	118.9	119.3	119.1	117.8	113.9	113.6	
Paving materials.....		77.1	76.3	72.5	68.2	67.4	67.6	72.5	82.6	95.5	91.7	86.7	85.4	64.3	
Roofing materials.....		155.3	152.7	150.5	152.9	154.4	155.8	157.2	157.1	156.6	151.0	149.4	146.7	119.2	
Rubber products.....	180.4	184.2	193.5	196.5	198.2	198.8	200.1	198.8	194.8	189.1	184.0	177.0	182.9	160.3	
Rubber tires and inner tubes.....		188.7	195.0	199.2	201.2	203.5	206.3	207.0	204.0	197.0	189.9	183.1	195.8	160.2	
Rubber boots and shoes.....		129.7	134.8	136.5	136.8	133.9	132.7	129.6	123.9	121.9	121.3	118.4	122.2	147.1	
Rubber goods, other.....		132.9	143.4	145.2	147.6	148.0	148.7	147.1	144.5	141.6	139.4	133.8	132.3	141.3	
Miscellaneous industries.....	174.4	176.3	179.8	182.1	180.9	179.3	183.2	182.0	180.2	176.9	175.1	170.5	170.8	181.7	
Instruments (professional and scientific), fire-control equipment.....		175.6	180.3	181.0	181.8	182.0	184.3	175.9	186.4	188.8	191.3	191.6	196.7	644.3	
Photographic apparatus.....		149.2	147.6	147.2	146.4	146.5	146.8	146.8	146.8	146.7	148.3	145.9	141.6	168.9	
Optical instruments and ophthalmic goods.....		177.6	179.9	183.4	186.2	187.9	188.5	185.7	185.4	182.0	182.1	181.8	183.0	235.0	
Pianos, organs, and parts.....		139.1	139.7	142.1	139.2	136.5	124.7	129.9	127.0	124.0	122.9	118.9	118.0	131.3	
Games, toys, and dolls.....		126.8	127.4	123.7	117.5	114.2	129.9	134.9	130.4	126.3	122.1	111.3	112.0	83.8	
Buttons.....		78.2	82.8	85.8	87.5	91.7	95.5	93.0	96.4	96.3	96.3	92.2	93.5	98.1	
Fire extinguishers.....		203.6	210.7	225.0	227.3	214.7	219.6	213.3	208.2	212.3	209.1	202.1	200.0	767.9	

¹ See footnote 1, table A-5.² See footnote 2, table A-5.

* Revised.

TABLE A-7: Indexes of Production-Worker Pay Rolls (Weekly) in Manufacturing Industries¹

[1939 average = 100]

Industry group and industry	1947						1946							Annual average
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	
All manufacturing.....	319.4	312.1	310.7	314.1	310.6	307.3	306.2	298.2	292.8	290.3	284.4	267.1	262.8	334.4
Durable goods.....	365.4	353.6	349.9	349.9	344.6	340.0	337.3	331.1	328.1	323.3	316.1	296.3	289.1	469.5
Nondurable goods.....	274.4	271.6	272.3	279.2	277.4	275.3	275.8	266.0	258.3	258.1	253.4	238.5	237.0	202.3
<i>Durable goods</i>														
Iron and steel and their products.....	315.0	306.7	295.7	294.2	287.9	287.9	276.2	280.8	273.7	273.6	265.9	247.5	240.3	311.4
Blast furnaces, steel works, and rolling mills.....		236.2	219.8	212.9	209.3	208.9	193.9	208.7	203.2	206.3	204.0	191.8	182.0	222.3
Gray-iron and semisteel castings.....		325.8	317.6	320.0	317.1	317.1	307.8	299.6	294.0	291.7	280.5	264.0	264.2	256.7
Malleable-iron castings.....		323.6	313.4	310.0	307.5	302.8	283.8	294.4	292.5	287.5	282.6	267.1	260.9	273.4
Steel castings.....		316.6	308.9	304.6	293.0	302.8	315.4	315.5	291.0	297.5	294.8	277.1	292.3	484.4
Cast-iron pipe and fittings.....		309.7	281.7	287.5	282.1	286.7	259.9	262.4	253.5	239.9	208.6	221.7	194.2	174.2
Tin cans and other tinware.....		250.4	248.5	243.3	238.7	242.8	244.5	232.6	248.8	274.1	270.1	248.7	234.7	161.6
Wire drawn from purchased rods.....		213.5	243.0	237.1	241.1	247.7	239.6	240.7	231.3	231.8	219.2	206.3	209.1	255.3
Wirework.....		255.5	270.5	279.8	254.9	273.8	261.7	261.7	265.1	270.9	256.5	237.2	210.7	202.6
Cutlery and edge tools.....		370.4	388.2	408.0	407.0	405.1	404.7	389.9	368.9	364.6	354.9	340.4	351.8	279.5
Tools (except edge tools, machine tools, files, and saws).....		340.0	361.4	362.8	355.6	361.3	360.8	348.8	355.8	340.8	326.2	303.6	316.9	334.1

See footnotes at end of table.

TABLE A-7: Indexes of Production-Worker Pay Rolls (Weekly) in Manufacturing Industries¹—Con

[1939 average=100]

Industry group and industry	1947						1946								Annual average
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	
Durable goods—Continued															
Iron and Steel and their products—Continued															
Hardware	306.3	301.2	300.2	298.6	291.9	286.2	281.5	278.3	266.6	257.3	244.9	241.5	245.8		
Plumbers' supplies	230.1	238.3	234.7	229.6	237.6	226.7	216.2	173.2	196.7	191.0	175.4	175.5	158.6		
Stoves, oil burners, and heating equipment not elsewhere classified	279.4	276.8	281.8	274.0	277.9	264.8	265.0	258.9	247.5	234.3	210.7	206.3	206.9		
Steam and hot-water heating apparatus and steam fittings	318.2	329.7	336.2	331.8	331.2	312.7	328.4	325.5	306.7	289.6	279.7	271.2	353.8		
Stamped and enameled ware and galvanizing	327.7	323.5	325.0	313.9	318.3	320.9	303.2	300.7	289.3	279.9	253.5	252.1	300.6		
Fabricated structural and ornamental metal-work	315.2	307.2	305.8	293.2	287.9	293.0	275.3	273.9	274.8	271.7	250.8	241.0	364.3		
Metal doors, sash, frames, molding, and trim	247.9	254.3	263.0	253.4	253.8	257.4	250.2	247.9	250.1	233.4	207.4	175.3	292.6		
Bolts, nuts, washers, and rivets	302.3	289.5	284.5	287.2	277.4	272.9	270.3	253.9	246.2	227.7	190.5	202.3	374.5		
Forgings, iron and steel	350.3	370.3	376.2	351.7	341.0	333.2	323.6	318.6	306.1	303.8	272.1	284.9	497.6		
Wrought pipe, welded and heavy-riveted	304.0	290.5	289.9	293.6	292.9	285.8	295.5	261.9	279.9	270.7	218.6	229.0	578.5		
Screw-machine products and wood screws	346.1	355.5	362.7	354.8	355.0	351.3	349.6	349.0	332.5	323.7	300.5	305.1	548.0		
Steel barrels, kegs, and drums	281.4	249.8	240.7	237.0	232.4	231.9	237.2	223.0	214.5	227.4	187.2	190.3	242.3		
Firearms	606.4	596.4	598.0	590.1	569.8	568.0	569.9	553.2	573.2	530.8	515.9	494.3	2881.7		
Electrical machinery	432.6	407.1	396.6	429.6	422.9	425.6	430.2	416.0	408.1	397.2	378.9	351.0	347.9	488.0	
Electrical equipment	327.8	317.0	322.3	315.2	317.2	317.0	308.3	303.7	297.7	283.3	264.3	257.5	444.7		
Radio and phonographs	413.6	409.8	419.7	415.7	423.2	447.7	427.3	408.5	390.0	369.8	332.1	329.0	472.3		
Communication equipment	349.3	350.0	524.3	528.1	530.3	535.8	521.3	521.5	504.9	483.4	459.2	476.0	503.1		
Machinery, except electrical	434.6	429.5	423.0	416.6	409.6	406.6	399.9	390.1	388.0	376.2	362.2	346.2	342.0	443.7	
Machinery and machine-shop products	362.6	357.6	354.9	352.0	350.3	346.7	336.8	333.5	322.3	314.2	299.4	296.4	430.9		
Engines and turbines	502.2	495.4	497.5	493.1	491.7	500.8	492.4	481.7	484.5	453.7	446.8	415.5	758.3		
Tractors	302.0	288.3	277.2	273.6	273.3	271.3	269.9	269.0	254.1	256.5	248.4	236.4	256.7		
Agricultural machinery, excluding tractors	344.3	333.2	312.5	308.3	294.9	291.1	280.7	277.2	269.8	252.9	247.5	248.1	256.0		
Machine tools	263.6	269.7	275.6	278.9	282.7	290.7	285.5	291.9	285.5	281.4	262.3	270.4	503.9		
Machine-tool accessories	311.6	320.4	326.7	332.5	342.7	351.0	343.4	343.3	336.0	316.3	293.2	304.8	577.8		
Textile machinery	363.7	351.8	353.2	347.3	337.3	321.7	301.1	298.3	290.5	277.9	265.3	265.5	230.1		
Pumps and pumping equipment	490.7	485.2	489.6	485.3	466.5	467.8	451.1	452.8	444.0	438.4	413.2	416.1	648.8		
Typewriters	309.1	295.4	287.7	282.6	276.2	270.1	279.0	261.6	248.1	228.2	216.5	212.7	143.8		
Cash registers, adding and calculating machines	417.3	415.5	401.1	388.5	355.7	347.2	352.0	336.0	331.8	292.8	314.2	309.0	341.6		
Washing machines, wringers and driers, domestic	388.8	373.9	355.6	323.5	326.8	306.2	291.7	301.2	287.9	269.5	234.6	238.7	301.5		
Sewing machines, domestic and industrial	390.8	296.0	296.0	287.6	278.1	273.0	260.5	255.0	243.1	238.9	229.6	226.1	282.3		
Refrigerators and refrigeration equipment	394.5	387.9	359.4	325.0	345.7	306.4	301.9	311.4	293.3	288.2	272.2	263.2	264.5		
Transportation equipment, except automobiles	500.3	558.9	565.3	556.9	558.2	562.6	571.2	531.1	542.3	524.1	553.1	558.7	557.5	3080.3	
Locomotives	757.0	705.4	723.7	827.2	797.2	876.0	836.8	895.6	846.8	826.8	836.0	840.2	1107.3		
Cars, electric and steam-railroad	461.3	457.7	446.0	440.2	411.2	408.8	406.6	386.2	364.5	362.0	341.5	325.2	457.9		
Aircraft and parts, excluding aircraft engines	642.1	660.2	662.2	667.8	668.7	683.3	680.4	681.3	663.9	640.8	605.6	585.5	3496.3		
Aircraft engines	431.6	487.6	479.9	506.8	535.0	533.7	484.3	530.2	507.8	498.3	468.9	469.4	4528.7		
Shipbuilding and boatbuilding	397.2	399.1	386.0	377.9	395.8	399.1	336.8	353.7	346.6	421.5	468.8	483.4	3594.7		
Motorcycles, bicycles and parts	363.1	349.0	349.5	327.6	318.5	346.7	318.4	317.5	290.9	272.1	239.8	250.2	253.6		
Automobiles	355.9	327.6	343.4	347.7	337.3	321.1	328.9	325.7	324.3	330.3	319.0	292.8	259.9	321.2	
Nonferrous metals and their products	346.2	350.4	354.0	359.0	360.0	354.8	356.3	345.3	338.8	331.8	324.2	303.9	298.6	354.5	
Smelting and refining, primary, of nonferrous metals	292.0	283.4	281.9	278.9	269.7	271.2	256.8	250.6	247.1	239.5	227.8	190.8	353.9		
Alloying and rolling and drawing of nonferrous metals except aluminum	283.4	294.6	299.4	307.0	301.4	301.9	290.0	286.6	284.7	283.0	268.7	268.6	353.4		
Clocks and watches	296.0	299.1	301.1	306.2	296.0	306.3	309.6	301.6	289.7	280.8	251.4	259.1	238.4		
Jewelry (precious metals) and jewelers' findings	215.4	220.2	232.8	233.9	236.8	250.5	231.0	235.5	237.3	221.1	201.6	218.9	165.1		
Silverware and plated ware	287.4	284.1	286.5	279.5	279.2	275.8	261.4	257.5	250.9	232.7	213.7	221.9	165.4		
Lighting equipment	295.5	283.6	288.9	297.5	285.7	272.5	271.2	264.6	260.6	252.5	230.2	233.3	207.2		
Aluminum manufactures	348.1	369.1	382.9	375.0	381.8	384.5	373.7	362.0	358.1	351.3	340.4	335.9	591.6		
Sheet-metal work, not elsewhere classified	278.7	274.6	273.4	275.3	277.4	281.9	278.0	280.8	261.7	269.0	246.1	249.5	277.7		
Lumber and timber basic products	374.9	351.4	323.4	310.1	310.7	292.4	290.6	284.7	292.0	285.2	285.6	252.1	261.9	215.1	
Sawmills and logging camps ¹	384.5	350.5	334.5	333.4	309.2	306.9	305.7	315.0	309.8	313.1	276.1	286.3	238.3		
Planing and plywood mills ²	348.9	332.0	323.3	318.9	311.5	308.6	291.3	294.8	280.8	274.1	242.0	254.5	197.8		
Furniture and finished lumber products	290.4	285.1	286.8	292.0	292.0	283.1	279.1	268.5	264.2	254.4	250.0	231.9	233.3	183.9	
Mattresses and bedsprings ¹	282.0	281.7	303.6	306.8	308.4	306.9	305.8	297.2	280.8	262.7	241.7	233.5	165.7		
Furniture ¹	279.1	282.4	288.8	289.1	278.8	273.4	263.7	260.1	249.9	246.7	228.0	229.9	185.3		
Wooden boxes, other than cigar ²	303.4	298.4	284.7	281.0	278.5	279.7	266.3	267.8	257.4	260.3	238.7	237.9	215.8		
Caskets and other morticians' goods ²	276.5	271.7	281.7	276.6	274.8	271.9	248.2	228.0	228.7	217.9	214.2	226.2	159.3		
Wood preserving ²	389.2	373.5	355.6	343.3	347.7	326.1	314.6	313.8	312.7	300.1	287.3	275.2	181.9		
Wood, turned and shaped ²	273.0	288.0	293.4	299.5	283.0	280.9	263.1	258.7	250.5	251.7	234.5	243.9	175.5		
Stone, clay, and glass products	298.2	287.3	288.8	285.7	278.4	280.0	281.6	274.8	271.3	267.0	260.1	242.2	241.4	189.1	
Glass and glassware	287.1	288.8	283.7	270.7	282.6	283.1	276.9	274.2	268.9	255.0	238.3	242.4	187.6		
Glass products made from purchased glass	274.1	277.5	277.2	277.2	268.7	264.4	252.6	239.6	222.9	227.4	205.5	217.6	165.9		
Cement	169.3	200.2	202.7	201.1	197.9	209.3	206.7	205.4	212.5	207.0	196.1	184.0	141.2		
Brick tile, and terra cotta	253.6	265.6	231.6	226.5	226.6	225.2	222.3	228.0	224.1	219.8	210.5	195.6	133.5		
Pottery and related products	295.9	300.0	288.4	278.8	270.0	274.4	262.5	262.0	257.7	252.4	229.0	238.9	188.6		
Gypsum	227.4	229.9	235.4	238.9	243.8	245.1	241.5	232.1	231.0	226.9	197.6	191.3	151.5		

See footnotes at end of table.

TABLE A-7: Indexes of Production-Worker Pay Rolls (Weekly) in Manufacturing Industries¹—Con.

[1939 average=100]

Industry group and industry	1947						1946						Annual average	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		June
Durable goods—Continued														
Stone, clay, and glass products—Continued														
Wallboard, plaster (except gypsum), and mineral wool		318.8	309.4	295.3	307.8	290.8	301.6	289.7	281.7	284.7	280.0	215.7	255.5	223.4
Lime		231.6	230.7	222.6	217.3	210.0	219.7	221.4	218.3	219.9	216.5	201.0	196.9	171.9
Marble, granite, slate, and other products		155.2	166.1	164.4	158.1	152.9	158.0	151.5	155.8	152.9	154.8	147.0	144.6	90.8
Abrasives		438.8	441.1	461.3	450.2	482.6	459.9	440.8	407.8	400.0	406.2	404.5	399.1	480.2
Asbestos products		298.6	300.4	307.4	307.1	305.3	300.0	293.4	287.5	273.7	270.0	252.4	250.6	254.6
Nondurable goods														
Textile-mill products and other fiber manufactures	242.5	248.3	255.4	265.0	262.0	254.3	253.7	246.0	241.1	235.5	229.4	213.3	217.2	178.9
Cotton manufactures, except smallwares		303.2	314.8	322.0	309.1	304.4	301.2	293.5	285.4	281.7	275.5	246.1	248.2	210.8
Cotton smallwares		212.6	221.5	232.8	237.3	239.3	231.9	220.6	228.7	222.0	220.3	207.6	207.0	209.5
Silk and rayon goods		200.4	200.9	208.8	206.9	201.3	197.9	191.4	189.3	180.9	181.4	166.3	166.8	134.5
Woolen and worsted manufactures, except dyeing and finishing		240.5	248.3	262.0	275.0	251.8	253.0	242.7	243.7	242.7	234.1	228.6	238.5	202.2
Hosiery		139.6	145.9	158.2	157.9	156.1	158.2	154.5	150.4	143.7	141.3	130.9	133.0	107.7
Knitted cloth		183.1	191.5	205.5	207.1	198.5	207.1	217.4	217.1	216.1	213.1	209.0	213.2	172.3
Knitted outer-wear and knitted gloves		195.6	209.7	231.7	237.8	238.3	250.4	252.2	243.9	234.0	220.1	216.7	235.5	189.4
Knitted underwear		232.1	228.3	230.9	223.0	215.5	216.1	207.9	203.9	199.4	196.1	189.7	189.7	180.2
Dyeing and finishing textiles, including woolen and worsted		211.2	215.2	218.3	217.2	215.3	210.4	201.6	195.2	186.8	187.6	178.8	184.5	156.3
Carpets and rugs, wool		230.6	226.5	222.4	214.5	210.6	214.3	204.0	196.2	182.5	173.0	165.2	169.5	141.2
Hats, fur-felt		153.3	145.4	175.0	178.0	180.5	191.0	185.2	182.0	181.3	137.9	152.0	160.0	117.6
Jute goods, except felts		256.0	247.2	255.4	255.9	240.1	236.4	228.6	239.4	237.4	225.8	217.2	224.5	190.9
Cordage and twine		255.4	270.2	272.7	273.6	271.8	278.4	268.0	268.5	266.2	255.9	229.3	246.1	233.3
Apparel and other finished textile products	274.9	272.1	279.8	317.7	314.1	300.6	292.7	283.2	283.6	283.0	272.5	240.3	258.6	185.2
Men's clothing, not elsewhere classified ²		270.5	267.1	281.3	280.8	277.2	278.4	271.9	246.2	242.7	236.4	215.3	230.3	174.9
Shirts, collars, and nightwear ²		228.8	227.3	233.7	234.0	225.9	230.3	217.7	195.6	190.6	185.3	178.2	180.9	143.6
Underwear and neckwear, men's ²		249.9	256.8	275.6	274.1	270.8	280.2	285.7	272.4	261.4	235.9	210.8	224.6	169.5
Workshirts ²		242.3	257.7	274.3	283.9	273.7	280.2	262.0	236.7	235.1	227.9	219.0	225.3	220.4
Women's clothing, not elsewhere classified ²		260.3	277.7	340.0	344.8	322.3	296.3	284.9	311.8	320.1	306.3	254.2	283.2	184.4
Corsets and allied garments ²		198.6	197.8	196.6	191.2	183.5	186.6	182.8	177.1	166.2	161.2	154.4	166.6	137.1
Millinery ²		118.9	137.7	197.2	201.9	169.6	140.4	117.2	168.3	179.7	166.2	144.9	120.9	123.3
Handkerchiefs ²		224.4	212.2	228.0	221.4	201.4	220.4	204.5	193.8	178.7	178.5	157.6	169.1	184.0
Curtains, draperies, and bedspreads ²		257.4	252.9	285.2	298.7	310.7	330.0	368.1	375.1	337.6	322.1	319.6	327.0	230.2
Housefurnishings, other than curtains, etc. ²		560.8	530.1	515.8	518.2	522.0	545.6	543.1	512.6	555.2	536.5	492.3	461.2	370.3
Textile bags ²		420.1	449.9	459.5	467.8	473.1	464.0	432.3	419.6	396.0	382.5	382.5	387.6	233.0
Leather and leather products	211.5	207.0	214.6	222.2	223.0	220.8	218.3	201.6	199.5	204.7	199.6	198.7	204.9	154.2
Leather ²		183.7	183.7	185.2	185.8	179.4	174.5	160.1	158.4	159.6	160.8	156.2	163.2	140.6
Boot and shoe cut stock and findings ²		170.0	179.2	190.5	189.1	192.0	191.8	183.5	182.4	182.4	194.0	179.9	186.7	142.2
Boots and shoes ²		197.0	205.3	213.7	214.2	212.8	209.3	190.8	188.2	195.2	188.1	190.4	196.2	142.0
Leather gloves and mittens ²		221.9	227.1	236.2	238.2	248.4	261.0	272.2	280.1	279.5	270.2	271.3	274.8	239.4
Trunks and suitcases ²		281.6	312.7	320.9	327.6	321.3	353.1	348.3	353.2	333.6	333.0	303.6	314.7	240.3
Food	267.8	252.8	243.1	239.3	242.5	256.4	263.3	252.0	232.2	246.5	254.3	235.1	208.2	180.9
Slaughtering and meat packing		231.5	211.4	217.1	237.8	268.0	236.9	215.7	110.5	118.2	202.3	179.9	167.4	200.1
Butter		274.3	257.2	243.3	237.3	233.7	246.6	243.4	256.1	258.7	265.0	267.6	257.9	169.6
Condensed and evaporated milk		330.5	308.5	286.1	278.2	269.8	256.2	253.7	264.9	279.9	293.2	305.9	311.3	197.2
Ice cream		219.2	202.3	188.9	182.8	181.6	185.5	183.2	194.9	204.0	215.7	221.7	203.6	124.0
Flour		240.4	252.6	261.4	257.2	268.2	267.8	256.1	256.4	249.1	238.6	221.1	190.9	177.6
Feeds, prepared		286.9	285.3	305.9	278.2	284.3	266.9	273.5	268.2	261.1	275.2	251.0	230.7	223.7
Cereal preparations		242.7	260.1	258.7	253.9	260.5	271.9	271.6	274.7	269.6	244.4	219.5	238.6	217.4
Baking		199.7	195.4	193.2	194.5	201.1	200.0	199.0	190.8	187.5	184.1	178.5	168.8	151.8
Sugar refining, cane		206.2	216.0	188.3	161.2	167.3	200.2	150.4	125.5	138.3	162.5	167.5	162.4	142.9
Sugar, beet		89.8	79.6	78.4	92.8	158.6	341.8	426.2	310.1	152.4	108.6	73.8	70.6	110.6
Confectionery		229.1	230.0	231.5	227.4	226.3	240.5	226.9	212.1	204.4	186.6	169.7	180.4	166.4
Beverages, nonalcoholic		190.3	178.9	165.7	163.4	164.6	169.1	163.7	161.6	170.6	185.0	186.1	172.1	153.9
Malt liquors		268.3	251.8	239.7	233.6	235.7	251.5	236.9	235.4	244.2	232.3	222.3	210.1	170.1
Canning and preserving		143.2	140.2	130.4	137.2	158.2	201.1	212.9	324.7	466.8	387.4	325.8	181.9	171.2
Tobacco manufactures	194.8	182.8	181.6	193.1	201.0	209.4	222.0	212.7	207.4	196.0	186.2	178.3	184.1	151.0
Cigarettes		220.9	218.4	226.8	233.6	241.5	254.7	247.1	238.9	226.7	218.7	211.1	217.8	172.0
Cigars		163.9	160.3	176.3	186.2	195.2	206.7	194.3	191.7	180.9	167.4	160.1	167.8	139.7
Tobacco (chewing and smoking) and snuff		125.7	139.4	144.4	144.0	155.8	166.8	166.7	160.0	150.7	149.3	140.5	135.7	131.1
Paper and allied products	299.6	292.6	290.9	290.9	288.1	285.1	284.5	276.6	268.5	259.8	256.5	246.4	247.0	184.8
Paper and pulp		259.0	254.8	252.5	251.4	246.9	244.9	240.3	234.9	228.0	227.8	218.4	216.7	169.9
Paper goods, other		250.1	247.6	249.3	246.2	246.4	249.0	240.0	233.5	225.8	216.4	211.8	218.1	184.1
Envelopes		240.2	238.8	238.8	237.3	234.9	235.4	229.3	212.9	207.9	205.5	198.4	210.4	168.6
Paper bags		270.4	274.9	283.8	283.9	292.2	283.5	268.6	264.8	252.6	233.9	237.7	233.9	174.0
Paper boxes		249.9	256.9	261.3	256.8	257.9	262.1	254.6	245.0	235.8	234.1	222.6	225.5	176.8
Printing, publishing, and allied industries	235.9	234.5	230.9	227.7	221.8	219.6	223.9	214.0	208.4	203.1	198.1	193.3	191.3	124.7
Newspapers and periodicals		208.8	201.7	196.9	191.0	185.2	189.7	182.0	178.9	176.5	168.8	163.7	162.0	111.1
Printing, book and job		240.4	240.3	238.9	234.2	235.2	239.4	227.9	220.8	215.8	210.4	209.1	204.6	132.6
Lithographing		202.1	205.7	205.1	199.1	201.1	203.4	196.1	191.4	185.2	182.6	173.2	176.3	123.0
Bookbinding		205.2	288.2	285.1	275.8	278.0	283.6	269.1	262.1	246.5	249.9	240.7	247.7	174.9
Chemicals and allied products	373.3	381.5	378.3	377.5	372.6	362.9	357.0	345.0	335.3	329.1	320.0	315.5	313.0	422.5
Paints, varnishes, and colors		234.1	231.7	230.6	222.0	216.4	214.7	208.2	204.8	201.7	204.2	199.3	199.7	152.9
Drugs, medicines, and insecticides		358.7	359.8	362.9	362.7	352.8	351.3	341.9	331.9	316.8	313.7	307.0	305.8	233.4

See footnotes at end of table.

TABLE A-7: Indexes of Production-Worker Pay Rolls (Weekly) in Manufacturing Industries¹—Con.

[1939 average = 100]

Industry group and industry	1947						1946								Annual average
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1943	
Nondurable goods—Continued															
Chemicals and allied products—Continued															
Perfumes and cosmetics		166.1	171.3	185.0	188.3	190.3	203.2	215.5	212.7	195.2	191.8	191.4	186.5	147.0	
Soap		217.2	215.9	214.8	208.3	199.2	195.7	170.8	169.0	173.2	171.7	170.2	172.8	146.1	
Rayon and allied products		239.0	239.2	236.4	236.0	219.7	216.3	215.2	209.8	210.8	206.2	197.6	198.3	162.5	
Chemicals, not elsewhere classified		334.9	329.5	326.8	323.5	321.0	313.4	301.3	294.0	289.6	288.0	289.2	283.0	273.5	
Explosives and safety fuses		333.8	310.6	315.3	307.9	320.3	299.2	282.7	292.4	292.9	272.6	264.5	265.9	1918.5	
Compressed and liquefied gases		269.8	265.9	253.9	258.4	248.1	247.4	242.5	220.0	240.8	247.2	238.8	239.4	264.3	
Ammunition, small-arms		351.7	336.4	333.2	334.1	332.3	326.7	332.3	326.2	339.3	301.4	335.7	331.3	6769.3	
Fireworks		674.6	715.6	628.4	623.7	661.1	788.6	824.6	778.4	698.3	623.1	622.1	708.5	5981.9	
Cottonseed oil		184.7	208.8	253.9	280.7	295.0	326.8	341.3	277.7	196.5	158.8	119.8	126.8	201.5	
Fertilizers		365.0	381.0	385.0	360.0	327.6	304.9	276.6	280.4	297.4	275.4	246.4	249.7	225.0	
Products of petroleum and coal															
Petroleum refining	286.2	274.7	264.2	262.1	256.8	253.9	250.9	252.6	252.7	257.3	253.1	251.0	242.5	184.3	
Coke and byproducts		242.7	235.6	234.9	228.8	227.5	230.2	226.9	228.2	232.7	228.7	228.0	223.3	172.3	
Paving materials		248.0	230.6	229.3	230.5	222.6	196.7	216.2	215.8	220.0	218.2	215.1	194.7	177.4	
Roofing materials		147.6	144.2	121.4	114.5	116.1	129.6	135.0	150.5	190.6	156.1	171.4	168.3	107.0	
		336.3	323.4	312.8	314.0	313.5	309.8	313.8	303.5	298.6	292.0	279.5	277.0	197.2	
Rubber products															
Rubber tires and inner tubes	363.4	371.2	383.9	374.3	385.0	386.3	392.2	377.4	361.3	363.9	336.9	321.4	331.4	263.9	
Rubber boots and shoes		349.0	357.2	343.2	357.7	361.2	368.9	360.3	346.1	348.9	311.2	304.3	318.3	256.3	
Rubber goods, other		282.0	283.7	274.3	280.6	276.0	272.6	253.7	214.8	245.8	240.2	226.6	244.8	246.4	
		276.6	296.6	297.3	302.8	303.4	308.6	292.4	288.5	282.4	277.7	255.9	255.2	234.5	
Miscellaneous industries															
Instruments (professional and scientific), and fire-control equipment	355.4	356.6	361.0	367.6	360.0	356.7	363.3	354.0	350.7	339.3	329.3	314.2	318.4	322.7	
Photographic apparatus		317.0	327.5	327.6	326.4	329.5	334.6	310.7	331.5	330.7	330.4	327.0	339.4	1140.5	
Optical instruments and ophthalmic goods		275.2	271.4	271.6	249.5	254.1	253.1	253.4	246.6	239.1	244.6	240.0	233.3	261.8	
Pianos, organs, and parts		331.2	324.2	334.5	334.3	344.8	346.3	337.1	332.8	322.1	316.5	314.9	314.2	368.2	
Games, toys, and dolls		300.2	293.8	298.6	302.6	297.7	242.2	270.2	250.5	241.1	230.8	213.7	220.4	247.9	
Buttons		280.5	275.0	269.7	246.7	236.4	285.6	298.6	280.1	260.4	252.1	222.1	222.7	142.8	
Fire extinguishers		167.7	178.4	189.2	196.9	203.0	215.7	211.3	211.0	214.1	208.6	195.2	203.0	171.6	
		396.9	380.5	410.0	409.7	425.9	438.8	431.9	415.8	414.7	405.8	397.1	406.4	1365.1	

¹ See footnote ¹ table A-5.² See footnote ² table A-5.

* Revised.

TABLE A-8: Estimated Number of Employees in Selected Nonmanufacturing Industries¹

[In thousands]

Industry group and industry	1947						1946								Annual average	
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	1943	1939
Mining: ¹																
Anthracite	66.5	67.1	66.4	67.7	68.7	69.1	68.7	68.7	68.9	68.1	67.9	67.5	65.5	67.0	71.2	82.8
Bituminous coal	329	328	309	332	335	336	326	334	334	335	337	332	332	248	386	371
Metal:	80.0	78.9	79.0	78.2	77.3	76.9	76.0	75.2	74.1	73.7	72.8	68.8	65.6	59.7	96.4	88.2
Iron		29.0	29.0	28.4	27.3	26.4	26.6	27.5	27.8	27.7	28.1	27.4	26.8	20.2	32.2	20.1
Copper		23.9	24.2	24.2	24.2	23.9	23.3	22.5	21.8	21.5	21.2	20.4	14.7	15.5	31.4	23.8
Lead and zinc		16.0	16.2	16.5	16.6	16.5	16.1	15.5	15.0	14.9	13.8	11.5	14.7	14.6	19.0	15.5
Gold and silver		7.8	7.9	8.0	7.9	7.7	7.6	7.3	7.2	7.2	7.2	7.0	7.1	7.1	7.3	24.8
Miscellaneous		2.2	2.3	2.3	2.2	2.2	2.4	2.4	2.3	2.4	2.5	2.5	2.3	2.3	6.6	4.0
Public utilities:																
Telephone	605	599	404	599	594	588	586	583	577	575	575	565	545	532	402	318
Telegraph ²	38.5	38.7	39.3	37.9	38.3	39.4	40.4	40.9	41.5	42.2	42.1	42.3	42.2	42.7	46.9	37.6
Electric light and power	263	258	256	254	252	250	252	250	249	249	249	247	244	241	211	244
Street railways and busses	253	252	254	254	254	254	252	253	252	252	252	250	249	247	227	194
Hotels (year round)	385	377	379	378	380	378	384	388	389	385	385	384	387	387	344	323
Power laundries ³															260	226
Cleaning and dyeing ⁴															80.7	67.5
Class I steam railroads ⁵	1,376	1,366	1,345	1,325	1,324	1,332	1,353	1,382	1,376	1,363	1,371	1,350	1,330	1,307	1,355	988

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of the pay period ending nearest the 15th of May 1947, as follows:

Mining: 2,800 establishments, 399,000 production workers.

Public utilities: 7,100 establishments, 522,000 employees.

Wholesale trade: 11,700 establishments, 324,000 employees.

Retail trade: 50,000 establishments, 1,337,000 employees.

Hotels (year-round): 1,300 establishments, 136,000 employees.

Power laundries and cleaning and dyeing: 1,600 establishments, 73,000 production workers.

Data for the two most recent months are subject to revision without notation. Revised data for earlier months are identified by an asterisk.

² Data are for production and related workers only.³ These data relate to nonsupervisory employees. Also excluded are messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.⁴ The change in definition from "wage earner" to "production worker" in the power laundries and cleaning and dyeing industries results in the omission of driver-salesmen. This causes a significant difference in the data. New series are being prepared.⁵ Source: Interstate Commerce Commission.

TABLE A-9: Indexes of Employment in Selected Nonmanufacturing Industries¹

[1939 average=100]

Industry group and industry	1947						1946								An nual- average 1943
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	
Mining:															
Anthracite	80.3	81.1	80.1	81.8	82.9	83.4	83.0	82.9	83.2	82.2	82.0	81.4	79.0	81.0	86.0
Bituminous coal	88.7	88.4	83.4	89.7	90.4	90.8	88.1	90.0	90.1	90.5	90.8	89.5	89.6	66.9	104.1
Metal	90.7	89.4	89.6	88.6	87.6	87.2	86.2	85.2	83.9	83.5	82.5	78.0	74.4	67.7	109.3
Iron	143.8	141.3	135.5	131.5	131.5	131.4	132.4	136.1	138.7	138.1	139.3	135.6	132.8	100.5	160.2
Copper	100.2	101.5	101.6	101.5	100.4	97.8	94.6	91.2	90.0	88.8	85.6	61.8	65.2	131.8	131.8
Lead and zinc	102.9	104.4	106.1	106.9	106.4	103.4	99.4	96.3	95.6	89.0	74.2	94.7	94.0	122.1	122.1
Gold and silver	31.4	31.9	32.2	31.7	31.3	30.7	29.6	28.9	29.0	29.1	28.5	28.8	28.6	29.4	29.4
Miscellaneous	56.5	57.0	56.9	55.2	54.7	59.6	60.9	59.2	60.4	63.7	62.5	58.4	57.2	164.9	164.9
Quarrying and nonmetallic	105.7	104.3	103.1	98.7	97.1	96.9	99.7	101.2	101.7	102.5	103.2	101.2	98.9	95.7	96.2
Crude petroleum production ¹	95.5	93.3	92.6	92.0	91.7	92.1	92.6	93.0	93.4	93.9	95.5	95.4	94.2	92.8	81.8
Public utilities:															
Telephone	190.4	160.1	127.2	188.4	186.9	185.2	184.6	183.4	181.6	181.0	181.1	177.7	171.7	167.6	126.7
Telegraph ²	102.3	102.8	104.5	100.7	101.8	104.6	107.4	108.7	110.3	112.0	111.9	112.4	112.1	113.5	124.7
Electric light and power	107.5	105.7	104.8	104.0	103.2	102.5	103.0	102.5	102.0	101.9	101.9	101.2	99.9	98.6	86.3
Street railways and busses	130.4	130.7	130.9	131.0	131.1	130.9	130.1	130.6	130.3	129.9	130.2	128.9	128.7	127.6	117.0
Wholesale trade	110.5	109.7	110.5	111.7	111.9	112.2	114.4	112.7	110.7	109.4	109.1	107.5	106.9	106.0	95.9
Retail trade:	111.4	111.3	111.4	111.2	109.6	110.5	126.5	117.4	112.2	109.8	106.6	106.2	107.2	107.2	99.9
Food	113.9	113.7	112.8	111.2	108.5	111.9	108.6	103.7	103.5	103.6	101.3	103.5	105.0	106.2	106.2
General merchandise	121.4	122.8	122.5	119.5	125.6	171.0	145.2	132.4	125.4	117.4	117.7	121.0	121.9	116.9	116.9
Apparel	114.3	114.7	113.4	107.9	110.0	135.5	124.1	120.1	116.7	105.9	107.9	114.3	114.3	110.1	110.1
Furniture and housefurnishings	84.6	84.6	84.4	84.3	84.3	90.4	85.5	83.1	81.5	79.5	78.1	77.6	76.7	67.7	67.7
Automotive	99.4	98.7	97.8	98.2	98.3	100.2	98.4	96.6	95.5	94.4	93.4	91.3	90.0	63.0	63.0
Lumber and building materials	117.6	116.3	115.5	113.9	113.4	116.1	115.1	113.6	113.8	112.6	111.1	109.4	107.7	91.5	91.5
Hotels (year-round)	119.4	118.4	117.5	117.3	117.7	117.3	119.1	120.2	120.6	119.5	119.3	119.1	119.9	119.9	106.6
Power laundries	112.2	110.2	109.1	108.7	109.5	111.0	110.9	109.9	110.1	109.9	111.6	113.6	112.3	110.7	115.3
Cleaning and dyeing	127.7	123.7	121.5	118.8	117.0	118.2	120.9	123.0	126.1	125.6	124.5	130.0	131.6	129.6	119.6
Class I steam railroads ⁴	139.3	138.3	136.1	134.2	134.0	134.9	136.9	139.9	139.3	138.0	138.8	136.6	134.7	132.3	137.2

¹ See footnote 1, table A-8.² Does not include well drilling or rig building.³ See footnote 3, table A-8.⁴ Source: Interstate Commerce Commission.TABLE A-10: Indexes of Pay Rolls (Weekly) in Selected Nonmanufacturing Industries¹

[1939 average=100]

Industry group and industry	1947						1946								Annual average 1943
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	
Mining:															
Anthracite	194.6	186.3	155.5	206.2	184.7	202.0	212.3	182.3	199.9	194.0	193.3	156.5	182.7	180.4	133.9
Bituminous coal	252.3	248.0	192.4	245.6	248.7	265.4	258.3	233.1	237.1	234.9	241.0	198.4	243.8	97.4	187.7
Metal	181.5	172.1	164.7	162.6	162.0	156.8	159.3	146.9	148.0	147.0	145.2	132.4	126.9	106.4	166.9
Iron		284.7	254.1	246.7	240.3	229.4	239.7	238.6	252.4	253.3	253.5	247.1	239.5	144.4	247.0
Copper		201.8	197.3	196.8	198.0	193.6	192.2	170.0	167.1	163.1	164.1	153.8	106.8	110.6	212.5
Lead and zinc		223.3	224.7	222.2	226.2	221.7	220.1	192.1	188.5	188.0	172.1	128.5	180.6	179.8	209.0
Gold and silver		49.3	50.5	50.7	51.0	48.3	49.8	44.5	43.0	42.5	43.5	38.5	41.6	39.6	36.9
Miscellaneous		95.8	92.1	92.1	85.3	85.5	93.3	99.9	99.9	98.0	103.5	96.7	95.5	92.1	259.8
Quarrying and nonmetallic	251.3	241.7	233.2	213.7	205.6	204.8	221.9	222.4	227.6	227.9	225.1	213.6	207.7	189.9	162.2
Crude petroleum production ¹	175.3	163.4	162.3	154.5	152.9	153.8	147.1	151.0	150.1	149.5	152.6	151.3	147.1	145.4	115.9
Public utilities:															
Telephone	292.5	196.9	136.1	267.2	269.4	267.5	264.5	273.0	269.2	265.0	267.6	268.8	259.9	254.0	144.9
Telegraph ²	218.8	226.9	239.3	198.0	*201.5	189.1	190.5	194.2	201.7	177.3	178.5	178.6	174.9	175.6	159.3
Electric light and power	177.5	168.2	166.5	160.8	163.7	159.5	161.6	157.6	155.3	153.3	152.4	150.2	148.4	144.2	109.2
Street railways and busses	222.1	220.0	218.8	218.6	219.5	216.1	213.6	210.9	212.6	207.9	211.2	206.7	199.5	195.2	155.7
Wholesale trade	198.0	191.4	190.8	191.6	190.4	189.7	197.2	189.7	184.5	182.8	177.3	174.5	172.6	169.6	127.0
Retail trade	201.2	195.1	192.6	190.1	187.5	187.2	212.2	191.7	182.5	180.8	174.6	172.6	171.3	166.2	120.6
Food		206.0	202.8	199.9	197.1	189.4	194.6	185.7	174.6	173.6	177.2	171.5	170.0	166.1	129.2
General merchandise		212.8	210.4	205.6	201.4	208.4	277.2	225.0	204.8	199.0	188.1	187.1	188.8	180.5	135.9
Apparel		200.8	200.8	194.6	184.1	188.2	230.2	207.6	201.5	197.8	176.2	177.5	186.9	181.0	133.9
Furniture and housefurnishings		151.1	148.1	146.6	143.8	144.1	165.7	148.6	139.8	139.1	129.7	129.6	126.6	123.3	86.5
Automotive		177.7	175.2	171.7	172.7	170.4	178.8	169.3	166.0	164.8	160.1	156.8	152.9	148.7	84.7
Lumber and building materials		210.2	203.8	201.3	197.7	193.4	200.5	191.9	190.9	190.0	186.1	180.1	177.2	173.5	120.7
Hotels (year-round) ³	226.4	221.1	219.4	216.8	216.6	215.1	218.8	218.5	214.5	209.5	208.9	204.9	205.0	204.6	138.7
Power laundries	211.1	203.8	200.5	196.9	196.1	201.8	201.0	191.5	189.8	188.7	188.4	193.3	190.9	186.2	149.5
Cleaning and dyeing	241.9	231.5	221.7	214.7	204.7	213.8	219.5	217.0	225.7	225.6	216.9	231.3	236.6	227.0	165.2
Class I steam railroads	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

¹ See footnote 1, table A-8.² See footnote 2, table A-9.³ Not available.⁴ See footnote 3, table A-8.⁵ Cash payments only; additional value of board, room, and tips, not included.⁶ Revised.

TABLE A-11: Estimated Number of Employees¹ on Contract Construction, by State

State	Employment (in thousands)													
	1947					1946								1945
	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	May
														Month-ly aver- age
Alabama	19.0	17.1	18.3	18.2	17.6	19.5	20.6	21.1	21.9	21.6	20.3	19.4	17.1	15.4
Arizona	9.6	9.5	9.0	9.2	9.0	8.7	8.5	8.9	9.1	8.5	8.0	7.3	7.0	6.0
Arkansas	17.0	15.0	14.2	14.6	14.5	15.2	15.5	16.6	16.6	17.4	16.3	12.7	11.9	22.8
California ²														
Colorado	13.3	12.6	12.2	12.8	12.9	12.5	12.2	12.7	13.5	13.4	11.9	11.1	10.3	9.5
Connecticut	27.7	26.6	25.4	23.6	24.8	27.5	28.2	28.2	27.1	27.4	25.8	25.1	24.4	13.3
Delaware	6.4	6.3	6.0	5.7	5.7	6.5	6.9	7.0	7.2	7.3	6.9	6.6	6.5	2.8
District of Columbia ³	18.2	16.2	15.7	15.8	15.0	15.9	17.3	17.9	17.5	17.4	16.7	15.8	15.6	12.3
Florida	37.4	37.3	36.5	38.4	40.9	41.9	41.4	41.2	40.1	38.8	36.1	34.3	34.1	22.9
Georgia	27.4	25.1	24.7	24.2	22.7	23.6	25.2	25.8	26.3	27.1	25.2	24.5	22.1	15.3
Idaho	7.1	5.7	5.3	5.0	4.6	5.8	6.5	6.3	6.5	7.2	6.9	6.8	6.1	3.3
Illinois	114.1	107.8	100.4	96.1	92.9	97.9	100.8	102.4	98.8	96.1	92.0	88.9	86.4	59.7
Indiana	38.5	37.9	35.1	34.3	32.8	36.0	36.6	39.7	38.5	38.7	37.9	35.0	33.4	32.4
Iowa	22.6	22.0	21.3	21.6	21.4	23.4	24.4	25.4	26.3	25.0	23.1	21.6	20.4	13.2
Kansas	19.4	17.6	14.7	14.8	15.1	17.2	18.2	19.1	19.4	18.9	17.1	15.6	14.8	13.5
Kentucky	15.4	14.8	14.3	14.2	14.1	15.8	16.8	17.4	16.7	16.5	15.8	15.1	14.9	10.0
Louisiana	25.9	24.7	24.9	23.4	24.4	26.3	26.8	28.3	32.1	31.7	29.7	25.4	23.5	17.8
Maine	10.0	7.9	6.8	6.5	6.9	8.3	9.4	9.5	9.6	9.4	8.6	7.7	7.2	4.1
Maryland	43.6	41.2	39.2	35.9	36.3	39.1	40.1	40.0	38.9	38.0	36.6	35.0	32.7	22.7
Massachusetts	59.4	54.0	52.5	50.8	52.2	58.0	62.1	64.3	65.4	64.4	61.2	54.3	52.4	34.1
Michigan	48.6	58.2	57.2	54.6	59.7	62.6	64.0	67.6	68.7	67.1	63.5	61.5	58.9	31.3
Minnesota	29.0	26.6	25.4	24.6	29.3	30.4	32.3	33.6	33.7	34.6	34.3	32.8	29.9	16.8
Mississippi	12.1	11.9	13.4	13.6	13.1	14.0	14.6	15.3	14.6	14.0	12.8	10.9	10.1	7.6
Missouri	35.6	38.6	41.5	41.8	42.4	45.0	45.7	46.2	43.5	41.9	40.7	35.5	34.2	22.4
Montana	6.6	5.6	4.9	5.1	4.8	5.2	6.3	6.8	6.9	7.0	6.3	5.9	5.1	3.5
Nebraska	12.8	10.9	8.7	8.5	11.0	12.3	12.9	13.7	14.5	15.2	14.6	14.1	12.6	7.1
Nevada	3.9	4.4	4.4	4.6	5.0	5.5	5.7	6.2	6.4	6.6	6.5	6.1	5.9	3.3
New Hampshire	6.3	5.5	5.1	5.2	5.5	6.9	7.2	7.4	7.1	6.9	6.7	6.5	5.8	2.7
New Jersey	57.1	59.4	57.8	56.7	55.9	60.9	61.4	63.3	61.5	60.5	59.6	58.6	57.4	34.3
New Mexico ²														
New York	172.5	164.4	157.4	157.7	167.3	180.8	187.6	191.7	184.1	177.2	166.3	152.8	139.4	102.3
North Carolina	39.1	37.3	38.6	36.9	37.9	39.6	39.9	40.1	40.0	39.1	37.0	35.1	32.6	14.4
North Dakota	3.8	3.0	2.9	3.1	2.6	3.0	4.0	3.7	3.7	3.7	3.3	3.1	2.7	1.6
Ohio	96.9	93.7	87.8	87.4	90.4	98.2	100.9	104.4	102.1	100.1	96.7	91.3	88.1	50.5
Oklahoma	22.7	20.5	19.9	19.2	18.1	19.3	19.1	19.7	19.9	19.6	17.8	16.0	13.8	8.0
Oregon	20.7	19.8	19.4	19.1	19.6	20.3	22.7	22.8	23.2	22.9	20.4	18.7	17.6	11.9
Pennsylvania	130.6	125.7	115.6	113.8	115.8	125.1	128.4	133.9	128.7	125.5	122.1	115.0	108.3	73.8
Rhode Island	9.6	9.4	8.2	8.0	8.2	9.2	9.1	8.5	8.0	7.7	7.5	7.4	7.3	7.9
South Carolina	17.2	17.4	17.0	16.7	16.9	17.1	17.8	18.4	19.9	19.0	18.4	16.2	14.8	7.8
South Dakota	3.7	2.9	2.7	2.8	2.8	3.1	3.6	4.1	4.7	4.0	3.5	3.2	3.1	1.9
Tennessee ²														
Texas	94.5	91.6	83.4	81.1	78.0	79.8	81.2	80.7	83.7	81.0	79.6	75.9	73.1	57.9
Utah	10.3	9.1	8.1	7.5	7.1	7.6	8.3	8.6	9.0	8.6	8.4	8.1	7.4	5.1
Vermont	3.4	2.7	2.3	2.4	2.4	2.5	2.9	3.0	2.7	2.8	2.7	2.6	2.5	1.1
Virginia	38.6	36.3	32.8	32.7	33.9	37.6	38.9	38.9	41.5	39.3	37.4	34.2	31.1	27.5
Washington	31.3	29.6	27.2	25.5	23.3	27.4	31.0	33.2	33.5	34.0	33.9	33.3	30.8	24.5
West Virginia	11.5	11.1	10.1	11.1	11.5	11.7	11.8	12.3	11.8	11.0	10.7	10.4	9.9	8.7
Wisconsin	36.5	34.0	33.4	33.0	37.5	39.6	40.8	40.7	41.2	39.6	38.7	36.1	33.9	25.9
Wyoming	5.4	5.4	4.5	4.6	3.5	4.6	4.9	5.1	5.4	5.5	4.9	4.3	3.8	2.4

¹ Covers all employees of firms whose major activity is construction. The estimates include all off-site employees of these firms (regardless of whether or not they are engaged in work relevant to construction activities) as well as employees at the site of construction projects. The data do not cover any self-employed persons, working proprietors, and employees of non-construction organizations (including force-account workers of public bodies and private firms) who may be engaged in construction activities.

² At date of publication, estimates for this State had not been completed.

³ 1947 revised.

Source: These estimates were compiled by the U. S. Bureau of Labor Statistics in connection with its State employment statistics program and as a segment of the Bureau's nonagricultural employment series. The estimates are derived from base data developed for a recent selected month from State Unemployment Compensation and Bureau of Old-Age and Survivors Insurance data, and adjusted monthly on the basis of current reports of employment made directly to the Bureau of Labor Statistics by a sample of contractors.

TABLE A-12: Total Federal Employment by Branch and Agency Group¹

Year and month	All branches	Executive ²				Legislative	Judicial	Government corporations ³
		Total	Defense agencies ⁴	Post Office Department ⁵	All other agencies			
All areas (including outside continental United States)								
1939.....	968, 572	935, 469	207, 978	319, 474	408, 017	5, 373	2, 260	25, 470
1943.....	3, 244, 924	3, 200, 527	2, 366, 251	364, 092	470, 184	6, 171	2, 636	35, 590
1946: June.....	2, 774, 163	2, 731, 642	1, 650, 995	418, 280	662, 367	6, 561	3, 081	32, 879
July.....	2, 689, 901	2, 646, 708	1, 547, 896	420, 709	678, 103	6, 697	3, 063	33, 433
August.....	2, 625, 051	2, 581, 932	1, 470, 579	424, 321	687, 032	6, 736	3, 036	33, 347
September.....	2, 517, 827	2, 474, 982	1, 358, 426	424, 734	691, 822	6, 825	3, 075	32, 945
October.....	2, 434, 015	2, 391, 478	1, 271, 976	425, 093	694, 409	6, 902	3, 061	32, 574
November.....	2, 400, 290	2, 357, 755	1, 229, 705	426, 177	701, 873	6, 896	3, 079	32, 560
December.....	2, 614, 126	2, 572, 000	1, 176, 596	715, 421	679, 983	6, 806	3, 061	32, 259
1947: January.....	2, 279, 039	2, 237, 128	1, 129, 710	426, 818	680, 600	6, 864	3, 066	31, 981
February.....	2, 256, 832	2, 214, 638	1, 104, 137	425, 754	684, 747	7, 080	3, 069	32, 045
March.....	2, 247, 293	2, 205, 082	1, 091, 197	426, 978	686, 907	7, 039	3, 061	32, 111
April.....	2, 215, 389	2, 173, 262	1, 058, 678	429, 507	685, 077	7, 174	3, 072	31, 881
May.....	2, 193, 113	2, 151, 264	1, 028, 043	435, 423	687, 798	7, 247	3, 071	31, 531
June.....	2, 168, 935	2, 127, 715	996, 238	437, 303	694, 174	7, 211	3, 061	30, 948
Continental United States								
1939.....	926, 636	897, 579	179, 380	318, 802	399, 397	5, 373	2, 180	21, 504
1943.....	2, 927, 288	2, 889, 682	2, 071, 261	363, 297	455, 124	6, 171	2, 546	28, 889
1946: June.....	2, 328, 734	2, 293, 189	1, 238, 769	416, 848	637, 572	6, 561	3, 013	25, 971
July.....	2, 266, 780	2, 230, 972	1, 159, 087	419, 282	652, 603	6, 697	2, 995	26, 116
August.....	2, 249, 059	2, 213, 468	1, 129, 390	422, 906	661, 172	6, 736	2, 968	25, 887
September.....	2, 198, 448	2, 163, 274	1, 074, 344	423, 331	665, 599	6, 825	3, 007	25, 342
October.....	2, 118, 825	2, 084, 103	992, 574	423, 702	667, 827	6, 902	2, 993	24, 827
November.....	2, 084, 062	2, 049, 287	949, 115	424, 785	675, 387	6, 896	3, 010	24, 869
December.....	2, 307, 993	2, 273, 572	906, 763	713, 160	653, 649	6, 806	2, 992	24, 623
1947: January.....	1, 982, 574	1, 948, 312	868, 473	425, 425	654, 414	6, 864	2, 998	24, 400
February.....	1, 971, 647	1, 937, 231	854, 850	424, 339	658, 142	7, 080	3, 001	24, 335
March.....	1, 964, 820	1, 930, 725	844, 818	425, 567	660, 340	7, 039	2, 993	24, 063
April.....	1, 942, 834	1, 909, 052	822, 597	428, 090	658, 365	7, 174	3, 004	23, 604
May.....	1, 924, 582	1, 890, 920	796, 135	433, 996	660, 789	7, 247	3, 003	23, 412
June.....	1, 905, 107	1, 871, 898	769, 268	435, 831	666, 799	7, 211	2, 993	23, 005

¹ Employment represents an average for the year or is as of the first of the month. Data for the executive branch are reported through the Civil Service Commission; data for the legislative and judicial branches and Government corporations are reported directly to the Bureau of Labor Statistics.

² From 1939 through June 1943 employment was reported for all areas monthly and employment within continental United States was secured by deducting the number of persons outside the continental area, which was estimated from actual reports as of January of 1939 and 1940 and July of 1941 and 1943. Beginning July 1943, employment within continental United States was reported monthly and the number of persons outside the country (estimated from quarterly reports) was added to secure employment in all areas.

³ Data for current months cover the following corporations: Federal Reserve banks, banks of the Farm Credit Administration, and the Panama Railroad Company. Data for earlier years include at various times the following additional corporations: Inland Waterways Corporation, Spruce Production Corporation, and certain employees of the Federal Deposit Insurance Corporation and of the Office of the Comptroller of the Cur-

rency, Treasury Department. Corporations not included in this column are under the executive branch.

⁴ Covers the War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and, until their abolition or amalgamation with a peacetime agency, the agencies created specifically to meet war and reconversion emergencies.

⁵ Prior to December 1943, employment data were adjusted upwards to convert the temporary substitute employees from a full-time equivalent to a name-count basis in order to be consistent with data reported subsequently. Prior to July 1945, clerks at third-class post offices were hired on a contract basis and therefore, because of being private employees, are excluded here. They are included beginning July 1945, however, when they were placed on the regular Federal pay roll by congressional action. Substitute rural mail carriers, which have been included in data published by the Civil Service Commission since September 1945, are excluded here. Employment figures include fourth-class postmasters in all months. Additional employment necessitated by the swollen Christmas business is included in December of each year; it is excluded from published figures of the Civil Service Commission beginning December 1942.

TABLE A-13: Total Federal Pay Rolls by Branch and Agency Group¹

[In thousands]

Year and month	All branches	Executive ¹				Legislative	Judicial	Government corporations ²
		Total	War agencies ⁴	Post Office Department ³	All other agencies			
All areas (including outside continental United States)								
1939	\$1,753,151	\$1,688,684	\$357,628	\$586,346	\$744,710	\$14,765	\$6,691	\$43,011
1944 ⁶	8,301,467	8,206,767	6,178,743	864,947	1,163,077	18,127	9,274	67,290
1946: June	533,860	525,485	306,230	82,703	136,552	1,828	950	5,597
July	561,423	552,335	282,855	95,601	173,879	2,169	1,041	5,878
August	568,811	559,734	291,914	95,873	171,947	2,158	1,141	5,778
September	551,286	542,388	286,603	94,329	161,366	2,139	1,106	5,653
October	564,372	555,048	278,795	96,805	179,448	2,194	1,190	5,939
November	524,421	515,284	255,098	96,836	163,350	2,127	1,193	5,817
December	569,003	559,755	259,348	137,277	163,130	2,166	1,190	5,892
1947: January	532,509	522,987	246,330	97,190	179,467	2,369	1,222	5,931
February	492,218	482,962	229,269	94,525	159,168	2,308	1,090	5,858
March	514,403	505,040	244,794	97,002	163,244	2,365	1,140	5,858
April	505,054	495,509	231,598	96,444	167,467	2,440	1,178	5,927
May	516,791	507,481	232,778	95,486	179,217	2,439	1,181	5,690
June	499,896	490,672	214,028	96,012	180,632	2,425	1,149	5,650
Continental United States								
1944 ⁶	\$7,628,373	\$7,541,181	\$5,553,522	\$862,271	\$1,125,388	\$18,127	\$8,878	\$60,187
1946: June	497,353	489,678	275,540	82,445	131,693	1,828	917	4,930
July	523,580	515,212	252,237	95,298	167,677	2,169	1,005	5,194
August	531,587	523,242	261,826	95,572	165,844	2,158	1,106	5,081
September	515,735	507,581	258,164	94,031	155,386	2,139	1,072	4,943
October	527,569	518,986	249,624	96,507	172,855	2,194	1,154	5,235
November	488,700	480,294	226,474	96,538	157,282	2,127	1,160	5,119
December	532,354	523,818	230,194	136,878	156,746	2,166	1,155	5,215
1947: January	490,368	481,517	211,379	96,869	173,269	2,369	1,183	5,299
February	450,172	441,602	193,834	94,203	153,565	2,309	1,055	5,206
March	469,854	461,282	207,247	96,679	157,356	2,365	1,105	5,102
April	462,991	454,194	196,756	96,128	161,310	2,440	1,143	5,214
May	472,537	463,916	196,068	95,164	172,684	2,439	1,145	5,037
June	457,868	449,308	179,411	95,683	174,214	2,425	1,114	5,021

¹ Data are from a series revised June 1947 to adjust pay rolls, which from July 1945 until December 1946 were reported for pay periods ending during the month, to cover the entire calendar month. Data for the executive branch are reported through the Civil Service Commission; data for the legislative and judicial branches and Government corporations are reported directly to the Bureau of Labor Statistics.

² From 1939 through May 1943, pay rolls were reported for all areas monthly. Beginning June 1943, some agencies reported pay rolls for all areas and some reported pay rolls for the continental area only. Pay rolls for areas outside continental United States from June 1943 through November 1946 (except for the War and Navy Departments for which these data were reported monthly) were secured by multiplying employment in these areas (see footnote 2 to table A-12 for derivation of the employment) by the average pay per person in March 1944, as revealed in a survey as of that date, adjusted

for the salary increases given in July 1945 and July 1946. Beginning December 1946 pay rolls for areas outside the country are reported monthly by most agencies.

³ See footnote 3, table A-12.

⁴ See footnote 4, table A-12.

⁵ Beginning July 1945, pay is included of clerks at third-class post offices who previously were hired on a contract basis and therefore were private employees and of fourth-class postmasters who previously were recompensed by the retention of a part of the postal receipts. Both these groups were placed on a regular salary basis in July 1945 by congressional action.

⁶ Data are shown for 1944, instead of 1943 as in the other Federal tables, because pay rolls for employment in areas outside continental United States are not available prior to June 1943.

TABLE A-14: Total Government Employment in Washington, D. C. by Branch and Agency¹

Year and month	Total government	District of Columbia government	Federal						
			Total	Executive 1				Legislative	Judicial
				All agencies	Defense agencies 1	Post Office Department	All other agencies		
1939.....	143, 548	13, 978	129, 570	123, 773	18, 761	5, 099	99, 913	5, 373	424
1943.....	300, 720	15, 867	284, 853	278, 176	144, 133	8, 273	125, 770	6, 171	506
1946: June.....	259, 732	16, 587	243, 145	236, 017	88, 763	7, 485	139, 769	6, 561	567
July.....	259, 765	17, 372	242, 393	235, 112	87, 348	7, 523	140, 241	6, 697	584
August.....	259, 511	17, 460	242, 051	234, 758	86, 883	7, 549	140, 326	6, 736	557
September.....	257, 448	17, 460	239, 988	232, 602	86, 307	7, 547	138, 748	6, 825	561
October.....	250, 826	17, 501	233, 325	225, 862	81, 495	7, 495	136, 872	6, 902	561
November.....	249, 811	17, 606	232, 205	224, 742	79, 085	7, 521	138, 136	6, 896	567
December.....	252, 539	17, 582	234, 957	227, 582	78, 383	11, 036	138, 163	6, 806	569
1947: January.....	246, 528	17, 795	228, 733	221, 293	75, 676	7, 819	137, 798	6, 864	576
February.....	245, 769	17, 912	227, 857	220, 206	75, 284	7, 618	137, 304	7, 080	571
March.....	244, 991	18, 012	226, 979	219, 367	75, 304	7, 552	136, 511	7, 039	573
April.....	243, 715	17, 981	225, 734	217, 984	75, 052	7, 466	135, 466	7, 174	576
May.....	241, 052	18, 024	223, 029	215, 210	73, 309	7, 413	134, 488	7, 246	573
June.....	237, 487	18, 149	219, 338	211, 554	71, 175	7, 309	133, 070	7, 215	569

¹ Data for the executive branch are reported through the Civil Service Commission; data for the legislative and judicial branches and District of Columbia Government are reported directly to the Bureau of Labor Statistics. Employment represents an average for the year or the number on the pay roll with pay during the last pay period of the month for the District of Columbia Government and the number in pay status as of the first of the month for the Federal Government.

² Beginning January 1942, data cover, in addition to the area inside the District of Columbia, the adjacent sections of Maryland and Virginia which are defined by the Bureau of the Census as in the metropolitan area.

³ Covers the War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and, until their abolition or amalgamation with a peacetime agency, the agencies created specifically to meet war and reconversion emergencies.

TABLE A-15: Personnel and Pay in Military Branch of Federal Government¹

(In thousands)

Year and month	Personnel (average for year or as of first of month) ²			Type of pay (total for year or for month)				
	Total	Army ³	Navy ⁴	Total	Pay rolls ⁵	Mustering-out pay ⁶	Family allowances ⁷	Leave payments ⁸
1939.....	345	191	154	\$331,523	\$331,523			
1943.....	8,944	6,733	2,211	11,173,186	10,140,852		\$1,032,334	
1946: June.....	3,446	2,009	1,437	736,131	544,515	\$143,984	47,632	
July.....	3,050	1,890	1,160	618,256	459,890	115,689	42,677	
August.....	2,745	1,815	930	559,112	413,575	104,937	40,583	\$17
September.....	2,474	1,731	743	507,851	377,702	90,570	37,572	2,007
October.....	2,477	1,738	739	607,943	378,853	64,343	35,650	129,097
November.....	2,441	1,717	724	733,071	345,969	50,617	35,316	301,169
December.....	2,204	1,511	693	683,036	320,533	45,315	33,165	284,023
1947: January.....	1,987	1,319	668	684,875	307,516	29,967	29,052	318,340
February.....	1,906	1,254	652	648,164	294,040	18,722	28,004	307,398
March.....	1,834	1,199	635	651,478	284,441	18,292	26,548	322,197
April.....	1,777	1,148	629	552,071	264,296	17,290	26,085	244,400
May.....	1,703	1,081	622	363,349	257,463	14,662	25,814	65,410
June.....	1,631	1,021	610	322,665	249,936	12,265	24,501	35,963

¹ Except for Army personnel for 1939 which is from the Annual Report of the Secretary of War, all data are from reports submitted to the Bureau of Labor Statistics by the various military branches.

² Includes personnel on active duty, those on terminal leave, the missing, and those in the hands of the enemy.

³ Prior to March 1944, data include persons on induction furlough. Prior to June 1942 and after April 1945, Philippine Scouts are included.

⁴ Covers Navy, Marine Corps, and Coast Guard.

⁵ Pay rolls are for personnel on active duty only. (Navy pay rolls previously published included pay of the retired and inactive reserves.) For the Army, pay rolls from 1943 through June 1946 represent actual expenditures. Army pay rolls for other periods and Navy pay rolls for all periods represent

estimated obligations based on an average monthly personnel count. Pay rolls for the Navy proper include cash payments for clothing-allowance balances in January, April, July, and October.

⁶ Represents actual expenditures.

⁷ Represents Government's contribution. The men's share is included in the pay rolls.

⁸ Leave payments were authorized by Public Law 704 of the 79th Cong. to former enlisted personnel for accrued and unused leave and to present officers and enlisted personnel for leave accrued in excess of 60 days. Payment of present personnel while on terminal leave is included in the pay roll. Value of bonds (representing face value, to which interest will be added at time bonds are cashed) and cash payments are included.

B: Labor Turn-Over

TABLE B-1: Monthly Labor Turn-Over Rates (Per 100 Employees) in Manufacturing Industries by Class of Turn-Over¹

Class of turn-over and year	January	February	March	April	May	June	July	August	September	October	November	December
Total accession:												
1947	6.0	5.0	5.1	5.1	4.7							
1946	8.5	6.8	7.1	6.7	6.1	6.7	7.4	7.0	7.1	6.8	5.7	4.3
1945	7.0	5.0	4.9	4.7	5.0	5.9	5.8	5.9	7.4	8.6	8.7	6.9
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939 ²	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8
Total separation:												
1947	4.9	4.5	4.9	5.2	5.4							
1946	6.8	6.3	6.6	6.3	6.3	5.7	5.8	6.6	6.9	6.3	4.9	4.5
1945	6.2	6.0	6.8	6.6	7.0	7.9	7.7	17.9	12.0	8.6	7.1	5.9
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939 ²	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
Quit:												
1947	3.5	3.2	3.5	3.7	3.4							
1946	4.3	3.9	4.2	4.3	4.2	4.0	4.6	5.3	5.3	4.7	3.7	3.0
1945	4.6	4.3	5.0	4.8	4.8	5.1	5.2	6.2	6.7	5.6	4.7	4.0
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939 ²	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
Discharge:												
1947	.4	.4	.4	.4	.4							
1946	.5	.5	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4
1945	.7	.7	.7	.6	.6	.7	.6	.7	.6	.5	.5	.4
1943	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939 ²	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
Lay-off:												
1947	.9	.8	.9	1.0	1.5							
1946	1.8	1.7	1.8	1.4	1.5	1.2	.6	.7	1.0	1.0	.7	1.0
1945	.6	.7	.7	.8	1.2	1.7	1.5	10.7	4.5	2.3	1.7	1.3
1943	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939 ²	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
Miscellaneous, including military:												
1947	.1	.1	.1	.1	.1							
1946	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1
1945	.3	.3	.4	.4	.4	.4	.4	.3	.2	.2	.2	.2
1943	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6

¹ Month-to-month changes in total employment in manufacturing industries as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month, while the latter, for the most part, refer to a 1-week period ending nearest the middle of the month. The turn-over sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing, and certain seasonal industries, such as canning and preserving, are not

covered. Plants on strike are also excluded. For the month of April, rates are based on reports from 7,000 establishments employing 4,500,000 workers.

² Preliminary figures.

³ Prior to 1943, rates relate to wage earners only.

⁴ Including temporary (of more than 7 days' duration), indeterminate, and permanent lay-offs.

⁵ Prior to September 1940, miscellaneous separations were included with quits.

TABLE B-2: Monthly Labor Turn-Over Rates (Per 100 Employees), in Selected Groups and Industries¹

Group and industry	Total accession		Separation									
			Total		Quit		Discharge		Lay-off		Miscellaneous including military	
	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April
Manufacturing												
Durable goods	4.8	5.4	5.6	5.5	3.5	3.9	0.4	0.5	1.6	1.0	0.1	0.1
Nondurable goods	4.7	4.8	5.1	5.0	3.4	3.6	.3	.4	1.3	.9	.1	.1
Iron and steel and their products	4.5	4.9	4.6	4.7	3.3	3.6	.4	.4	.8	.5	.1	.2
Blast furnaces, steel works, and rolling mills	3.9	3.6	3.1	3.0	2.4	2.6	.2	.2	.3	.1	.2	.1
Gray-iron castings	7.9	8.6	8.2	8.7	6.5	6.8	1.0	1.0	.5	.6	.2	.3
Malleable-iron castings	7.6	7.9	6.9	8.1	5.6	6.7	.5	.6	.5	.2	.3	.6
Steel castings	4.4	5.1	5.4	4.8	3.3	3.4	.4	.6	1.5	.7	.2	.1
Cast-iron pipe and fittings	3.7	6.1	4.4	4.5	3.3	3.7	.5	.3	.5	.5	.1	(³)
Tin cans and other tinware	4.9	5.8	6.9	5.8	3.3	3.4	.5	.7	3.0	1.5	.1	.2
Wire products	3.0	3.0	3.5	3.9	2.2	2.6	.3	.4	.8	.7	.2	.2
Cutlery and edge tools	2.8	4.8	9.4	4.3	3.1	3.2	.7	.7	5.5	.4	.1	(³)
Tools (except edge tools, machine tools, files, and saws)	3.2	3.9	4.8	5.6	3.5	4.1	.5	.5	.8	.9	(³)	.1
Hardware	6.1	6.5	6.8	6.4	5.2	5.3	.5	.6	1.0	.4	.1	.1
Stoves, oil burners, and heating equipment	5.5	5.8	7.4	6.7	4.0	4.7	.8	.7	2.5	1.2	.1	.1

See footnotes at end of table.

TABLE B-2: Monthly Labor Turn-Over Rates (Per 100 Employees), in Selected Groups and Industries¹—Continued

Group and industry	Total accession		Separation									
			Total		Quit		Discharge		Lay-off		Miscellaneous including military	
	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April
Manufacturing—Continued												
Iron and steel and their products—Continued												
Steam and hot-water heating apparatus and steam fittings	4.2	5.2	6.6	6.9	4.3	4.6	0.6	0.6	1.6	1.6	0.1	0.1
Stamped and enameled ware and galvanizing	5.8	7.4	6.0	6.7	4.6	4.8	.5	.7	.8	1.0	.1	.2
Fabricated structural-metal products	4.6	6.3	5.2	6.4	3.2	3.8	.6	.6	1.3	1.9	.1	.1
Bolts, nuts, washers, and rivets	2.6	4.4	3.8	4.3	2.3	3.1	.4	.4	1.0	.6	.1	.2
Forgings, iron and steel	3.9	4.7	5.1	4.4	3.0	3.4	.5	.5	1.5	.4	.1	.1
Electrical machinery	3.4	4.0	5.2	5.3	2.6	3.1	.4	.5	2.1	1.6	.1	.1
Electrical equipment for industrial use	2.3	2.7	3.5	3.3	1.9	2.1	.2	.3	1.2	.8	.2	.1
Radios, radio equipment, and phonographs	5.1	5.1	8.2	7.9	3.4	3.9	.9	.9	3.8	3.0	.1	.1
Communication equipment, except radios	1.9	2.7	3.1	4.1	2.5	3.0	.2	.2	.3	.8	.1	.1
Machinery, except electrical	4.2	4.4	4.4	4.5	2.8	3.1	.4	.5	1.1	.8	.1	.1
Engines and turbines	4.1	4.1	5.8	5.1	2.9	3.1	.7	.5	2.1	1.4	.1	.1
Agricultural machinery and tractors	4.3	5.2	4.0	4.7	3.3	3.8	.3	.4	.2	.2	.2	.3
Machine tools	2.1	2.4	4.5	3.8	1.8	2.0	.3	.3	2.2	1.3	.2	.2
Machine-tool accessories	2.3	2.8	6.7	5.2	2.2	2.3	.5	.4	3.9	2.4	.1	.1
Metalworking machinery and equipment, not elsewhere classified	3.0	3.2	3.5	4.4	2.7	3.4	.3	.3	.4	.6	.1	.1
General industrial machinery, except pumps	3.3	3.6	4.3	4.5	2.5	2.9	.4	.5	1.3	1.0	.1	.1
Pumps and pumping equipment	3.0	4.0	3.9	4.4	2.5	3.4	.6	.5	.7	.5	.1	(3)
Transportation equipment, except automobiles	6.1	7.8	9.7	8.1	4.2	4.1	.5	.6	4.9	3.3	.1	.1
Aircraft	4.8	6.4	9.6	5.8	5.0	3.9	.4	.3	4.1	1.5	.1	.1
Aircraft parts, including engines	2.7	3.2	5.1	6.8	2.8	3.5	.4	.6	1.9	2.7	(3)	(3)
Shipbuilding and repairs	9.3	12.2	12.4	12.0	4.7	5.0	.8	1.1	6.8	5.8	.1	.1
Automobiles	3.9	5.3	5.3	4.7	3.2	3.5	.4	.5	1.6	.6	.1	.1
Motor vehicles, bodies, and trailers	3.6	5.4	4.9	4.5	3.0	3.6	.4	.5	1.4	.3	.1	.1
Motor-vehicle parts and accessories	4.6	5.0	6.1	5.2	3.5	3.4	.6	.6	1.8	1.0	.2	.2
Nonferrous metals and their products	3.3	4.2	6.4	6.0	3.1	3.5	.4	.6	2.8	1.8	.1	.1
Primary smelting and refining, except aluminum and magnesium	4.0	3.7	4.0	3.3	2.4	2.6	.4	.3	1.1	.3	.1	.1
Rolling and drawing of copper and copper alloys	1.3	2.4	4.5	4.2	2.1	2.8	.2	.3	2.1	1.0	.1	.1
Lighting equipment	4.5	5.4	4.9	4.9	3.9	3.5	.2	.4	.8	1.0	(3)	(3)
Nonferrous-metal foundries, except aluminum and magnesium	3.5	5.0	7.1	6.8	3.5	4.4	.4	.9	3.1	1.3	.1	.2
Lumber and timber basic products	8.6	9.1	7.1	7.7	6.1	6.5	.4	.5	.5	.6	.1	.1
Sawmills	8.7	8.8	6.8	7.0	5.9	6.0	.4	.3	.4	.6	.1	.1
Planing and plywood mills	6.3	6.2	5.5	5.6	4.8	4.7	.5	.5	.2	.3	(3)	.1
Furniture and finished lumber products	6.9	6.8	7.7	8.3	5.5	6.0	.6	.8	1.5	1.4	.1	.1
Furniture, including mattresses and bedsprings	6.9	6.9	7.6	8.4	5.4	6.1	.6	.8	1.5	1.4	.1	.1
Stone, clay, and glass products	4.0	4.4	4.7	4.5	2.9	3.2	.4	.4	1.3	.8	.1	.1
Glass and glass products	4.0	4.3	5.3	4.8	2.4	2.9	.5	.5	2.2	1.2	.2	.2
Cement	4.9	4.6	4.5	4.1	3.7	3.5	.5	.4	.2	.1	.1	.1
Brick, tile, and terra cotta	5.5	5.9	5.4	4.7	3.8	3.6	.7	.5	.7	.5	.2	.1
Pottery and related products	3.6	4.8	4.7	4.2	3.4	3.1	.3	.3	.9	.8	.1	(3)
Textile-mill products	4.5	4.9	5.9	5.5	3.8	4.0	.4	.4	1.6	1.0	.1	.1
Cotton	5.3	5.8	6.7	6.3	4.8	5.1	.4	.4	1.4	.7	.1	.1
Silk and rayon goods	3.5	3.9	4.3	5.1	2.7	3.1	.2	.3	1.3	1.6	.1	.1
Woolen and worsted, except dyeing and finishing	3.4	3.8	5.3	4.5	2.7	2.7	.3	.4	2.2	1.3	.1	.1
Hosiery, full-fashioned	2.4	2.3	3.9	4.2	2.2	2.4	.2	.3	1.4	1.4	.1	.1
Hosiery, seamless	5.1	5.0	6.9	7.1	4.2	4.8	.2	.2	2.3	1.8	.2	.3
Knitted underwear	5.2	5.0	4.6	5.7	4.0	3.9	.2	.4	.4	1.4	(3)	(3)
Dyeing and finishing textiles, including woolen and worsted	2.5	3.5	3.6	3.7	2.2	1.8	.5	.5	.8	1.3	.1	.1
Apparel and other finished textile products	5.5	5.5	6.1	5.7	4.3	4.5	.3	.3	1.5	.9	(3)	(3)
Men's and boys' suits, coats, and overcoats	3.9	4.6	3.5	3.9	3.1	3.5	.2	.2	.2	.2	(3)	(3)
Men's and boys' furnishings, work clothing, and allied garments	5.8	5.6	6.6	5.9	4.6	4.7	.2	.3	1.8	.9	(3)	(3)
Leather and leather products	4.0	4.6	5.0	4.8	3.5	3.7	.3	.3	1.1	.7	.1	.1
Leather	2.5	3.3	3.4	3.4	2.2	2.4	.3	.3	.8	.6	.1	.1
Boots and shoes	4.3	4.8	5.3	5.0	3.8	3.9	.3	.3	1.1	.7	.1	.1
Food and kindred products	6.7	6.3	5.6	5.9	3.8	4.3	.4	.5	1.3	1.0	.1	.1
Meat products	10.3	7.2	7.9	6.8	4.6	3.6	.9	.6	2.2	2.4	.2	.2
Grain-mill products	3.4	3.1	4.0	5.0	2.8	3.6	.3	.4	.9	.9	(3)	.1
Tobacco manufactures	5.8	4.6	6.4	5.8	3.7	3.4	.3	.3	2.3	2.0	.1	.1
Paper and allied products	4.4	4.4	5.0	4.5	3.4	3.3	.5	.6	.8	.4	.3	.2
Paper and pulp	3.9	3.9	3.4	3.7	2.5	2.7	.4	.5	.3	.3	.2	.2
Paper boxes	4.3	5.6	6.8	6.7	4.7	4.8	.6	.9	1.2	.8	.3	.2

See footnotes at end of table.

TABLE B-2: Monthly Labor Turn-Over Rates (Per 100 Employees), in Selected Groups and Industries¹—Continued

Group and industry	Total accession		Separation									
			Total		Quit		Discharge		Lay-off		Miscellaneous including military	
	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April	May ²	April
<i>Manufacturing—Continued</i>												
Chemicals and allied products.....	2.8	2.6	2.8	2.8	1.7	1.7	0.3	0.3	0.7	0.7	0.1	0.1
Paints, varnishes, and colors.....	3.2	3.1	3.1	2.7	1.9	1.8	.4	.6	.8	.3	(³)	(³)
Rayon and allied products.....	2.2	1.7	2.0	1.8	1.5	1.2	.3	.2	.1	.2	.1	.2
Industrial chemicals, except explosives.....	2.9	2.8	3.0	3.3	1.6	1.8	.3	.3	1.0	1.1	.1	.1
Products of petroleum and coal.....	2.8	2.1	1.1	1.1	.8	.7	.1	.1	.1	.2	.1	.1
Petroleum refining.....	2.7	2.1	1.0	1.0	.7	.6	.1	.1	.1	.2	.1	.1
Rubber products.....	2.8	3.1	4.6	4.1	2.9	2.8	.4	.3	1.3	.9	(³)	.1
Rubber tires and inner tubes.....	1.8	1.9	3.5	2.6	2.1	1.9	.2	.2	1.2	.4	(³)	.1
Rubber footwear and related products.....	3.4	4.4	5.1	6.4	4.1	4.5	.3	.3	.7	1.6	(³)	(³)
Miscellaneous rubber industries.....	4.2	4.7	6.1	6.3	3.6	3.9	.6	.6	1.8	1.6	.1	.2
Miscellaneous industries.....	2.7	3.7	3.7	4.3	2.2	2.5	.3	.3	1.1	1.4	.1	.1
<i>Nonmanufacturing</i>												
Metal mining ⁴	6.5	6.7	5.9	5.9	4.9	5.0	.4	.4	.4	.3	.2	.2
Iron ore.....	4.1	6.4	2.5	2.8	2.0	2.3	.3	.1	(³)	.1	.2	.3
Copper ore.....	7.3	7.1	7.0	8.0	6.3	7.1	.5	.6	.1	.2	.1	.1
Lead- and zinc-ore.....	7.9	5.5	7.8	6.1	6.5	5.1	.6	.5	.6	.4	.1	.1
Coal mining:												
Anthracite mining.....	1.6	1.5	2.1	2.5	1.6	1.5	(³)	.1	.4	.7	.1	.2
Bituminous-coal mining.....	3.3	3.0	3.6	3.6	3.0	3.0	.1	.2	.3	.3	.2	.1
Public utilities:												
Telephone.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Telegraph.....	(⁴)	2.2	(⁴)	3.0	(⁴)	2.4	(⁴)	.1	(⁴)	.4	(⁴)	.1

¹ Since January 1943 manufacturing firms reporting labor turn-over have been assigned industry codes on the basis of current products. In the employment and pay-roll sample, however, plants which were in operation in 1939 are classified according to their major activity at that time, regardless of any subsequent change in major products.

² Preliminary figures.

³ Less than 0.05.

⁴ Not available.

⁵ For the month of April, rates for mining industries are based on reports from 500 establishments employing 230,000 persons.

TABLE B-3: Monthly Labor Turn-Over Rates for Men and Women¹ in all Manufacturing and Selected Groups

Industry group	Men						Women					
	Total accession		Separation				Total accession		Separation			
			Total		Quit				Total		Quit	
	May ¹	Apr.	May ¹	Apr.	May ¹	Apr.	May ¹	Apr.	May ¹	Apr.	May ¹	Apr.
	(Per 100 men employees)						(Per 100 women employees)					
All manufacturing.....	4.6	4.9	5.0	5.0	3.1	3.5	4.9	5.4	6.6	6.0	4.2	4.4
Durable goods.....	4.8	5.4	5.5	5.5	3.5	3.9	4.4	4.9	6.7	5.9	3.7	3.7
Nondurable goods.....	4.3	4.2	4.2	4.1	2.6	2.8	5.0	5.6	6.3	6.1	4.5	4.6
Iron and steel and their products.....	4.5	5.0	4.5	4.9	3.2	3.8	4.3	5.2	6.6	5.4	3.9	3.9
Electrical machinery.....	2.8	3.5	3.9	3.9	2.0	2.5	4.6	4.9	7.8	7.7	3.7	4.2
Machinery, except electrical.....	4.1	4.3	4.4	4.4	2.6	3.0	4.1	4.1	5.0	4.3	3.0	2.9
Transportation equipment except automobiles.....	6.3	7.8	10.2	8.4	4.4	4.2	3.4	4.9	6.2	5.1	3.2	2.4
Automobiles.....	3.6	4.6	5.0	4.4	3.0	3.2	3.8	5.1	7.2	4.6	3.0	3.0
Nonferrous metals and their products.....	3.3	4.0	6.2	6.1	2.9	3.5	3.1	5.0	7.1	5.7	3.5	3.8
Lumber and timber basic products.....	8.8	9.3	7.3	7.8	6.2	6.6	5.2	4.5	4.4	4.9	4.0	4.5
Furniture and finished lumber products.....	6.9	6.9	7.7	8.6	5.5	6.2	6.7	6.7	7.5	7.1	5.6	4.9
Stone, clay, and glass products.....	4.0	4.4	4.5	4.5	2.8	3.2	4.3	4.6	6.2	4.6	3.5	3.3
Textile-mill products.....	4.5	4.9	5.4	5.3	3.4	3.7	4.6	5.0	6.5	6.0	4.3	4.5
Apparel and other finished textile products.....	5.8	4.0	6.1	4.2	3.2	3.1	5.5	6.0	5.9	6.0	4.5	4.8
Leather and leather products.....	3.8	4.3	4.5	4.4	3.0	3.2	4.4	5.1	5.8	5.5	4.5	4.6
Food and kindred products.....	6.0	5.5	4.7	4.9	3.1	3.4	7.2	8.6	9.2	8.8	6.6	6.8
Tobacco manufactures.....	5.7	3.5	5.5	5.7	1.9	1.7	5.9	5.2	6.9	5.8	4.8	4.2
Paper and allied products.....	4.0	4.3	3.8	4.1	2.8	3.1	4.0	4.0	6.8	5.3	4.0	3.9
Chemicals and allied products.....	2.7	2.5	2.6	2.6	1.5	1.5	3.3	3.4	4.3	3.6	2.8	2.4
Products of petroleum and coal.....	2.8	2.1	1.0	1.0	.7	.6	2.4	2.2	3.0	2.1	2.6	1.8
Rubber products.....	2.7	2.8	3.9	3.5	2.5	2.5	3.2	3.8	6.6	6.1	3.9	3.9
Miscellaneous industries.....	2.3	3.0	3.4	4.0	1.9	2.2	3.5	4.9	4.3	5.1	2.7	3.1

¹ These figures are based on a slightly smaller sample than that for all employees, inasmuch as some firms do not report separate data for women.

Rates for April are based on 6,900 reports covering 4,300,000 employees.

² Preliminary figures.

C: Hours and Earnings

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries ¹

Year and month	All manufacturing			Durable goods			Nondurable goods			Iron and steel and their products								
										Total: Iron and steel and their products			Blast furnaces, steel works, and rolling mills			Gray-iron and semi-steel castings		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$23.86	37.7	Cents 63.3	\$26.50	38.0	Cents 69.8	\$21.78	37.4	Cents 58.2	\$27.52	37.2	Cents 73.9	\$29.88	35.3	Cents 84.5	\$25.93	37.1	Cents 69.9
1941: January	26.64	39.0	68.3	30.48	40.7	74.9	22.75	37.3	61.0	31.07	40.4	76.9	33.60	40.2	86.9	30.45	41.2	73.9
1946: May	42.51	39.7	107.1	45.10	39.3	114.7	39.93	40.1	99.6	45.74	38.4	119.0	46.16	35.8	129.0	48.68	41.4	117.8
June	43.31	40.0	108.4	46.32	39.8	116.5	40.28	40.2	100.3	46.74	38.8	120.6	46.98	36.0	130.3	50.01	41.8	119.8
July	43.38	39.7	109.3	46.24	39.3	117.7	40.46	40.1	100.9	46.80	38.5	121.6	47.85	36.4	131.4	48.53	40.4	120.3
August	44.99	40.5	111.2	48.02	40.5	118.6	41.89	40.4	103.6	48.78	39.9	122.2	49.84	38.2	130.5	50.90	41.8	121.8
September	45.39	40.3	112.6	48.36	40.3	120.1	42.34	40.3	105.0	49.29	39.7	124.1	50.28	38.0	132.5	52.58	42.3	124.3
October	45.73	40.5	113.0	48.90	40.7	120.2	42.45	40.2	105.6	49.86	40.3	123.9	50.59	38.7	130.3	53.36	42.8	124.8
November	45.79	40.2	113.9	48.62	40.2	121.0	42.87	40.3	106.5	49.91	40.0	124.7	50.82	38.8	131.0	52.78	41.8	126.3
December	46.96	40.9	114.8	49.57	40.8	121.6	44.24	41.1	107.7	49.67	39.8	124.8	48.59	37.0	131.4	53.98	42.6	126.6
1947: January	47.10	40.6	116.1	49.60	40.5	122.4	44.47	40.7	109.4	50.64	40.2	126.1	50.89	38.2	133.2	54.43	42.7	127.5
February	47.29	40.4	117.0	49.74	40.5	122.9	44.67	40.4	110.7	50.33	40.0	125.8	50.67	38.5	131.7	54.04	42.1	128.3
March	47.69	40.4	118.0	50.30	40.7	123.6	44.89	40.1	111.9	51.31	40.4	126.9	51.77	38.9	133.3	54.49	42.3	129.0
April	47.48	40.0	118.6	50.30	40.5	124.3	44.40	39.6	112.2	51.79	40.4	128.1	52.83	39.2	134.7	54.57	42.0	130.0
May	48.46	40.1	120.8	51.71	40.5	127.7	44.93	39.7	113.1	53.73	40.4	133.1	56.26	39.2	143.6	56.34	42.6	132.2
Iron and steel and their products—Continued																		
	Malleable-iron castings			Steel castings			Cast-iron pipe and fittings			Tin cans and other tinware			Wirework			Cutlery and edge tools		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$24.16	36.0	Cents 67.1	\$27.97	36.9	Cents 75.9	\$21.33	36.4	Cents 58.1	\$23.61	38.8	Cents 61.1	\$25.96	38.1	Cents 68.3	\$23.11	39.1	Cents 60.1
1941: January	28.42	40.2	70.7	32.27	41.4	78.0	25.42	40.5	62.6	25.31	39.8	63.9	28.27	39.7	71.2	25.90	40.5	65.2
1946: May	45.18	37.7	119.9	48.18	38.7	124.4	39.76	39.8	99.8	39.25	37.6	104.6	44.55	39.2	113.8	44.79	43.8	102.2
June	48.36	39.9	121.1	48.29	38.4	125.8	41.11	39.7	103.6	42.43	40.2	105.4	47.20	41.2	114.4	45.03	43.4	103.7
July	49.60	40.6	122.2	46.35	36.7	126.3	41.55	40.1	103.5	43.47	40.9	106.7	49.61	41.9	118.3	43.74	42.3	103.2
August	51.28	40.7	126.0	49.32	38.9	126.9	42.30	40.8	103.6	45.97	42.6	108.6	49.36	41.5	118.8	44.98	43.1	104.3
September	51.50	40.7	126.6	49.28	38.3	128.6	43.67	40.7	107.1	46.22	41.9	111.1	49.89	41.3	120.7	45.83	43.0	106.5
October	52.27	40.9	127.7	50.27	38.9	129.3	45.23	42.3	106.8	44.68	40.8	110.0	48.87	40.9	119.6	46.49	43.0	108.0
November	51.74	40.4	128.2	51.87	39.9	129.8	45.92	43.0	106.7	42.68	39.1	109.7	48.94	40.6	120.5	46.41	42.7	108.6
December	51.35	40.3	127.5	51.72	39.8	130.0	46.17	41.8	110.3	44.79	40.8	110.4	49.28	41.0	120.2	47.50	43.3	109.5
1947: January	52.92	40.9	128.8	50.68	39.0	129.8	49.51	43.9	112.8	44.30	40.0	111.1	50.05	41.3	121.3	47.19	42.7	110.4
February	52.81	40.9	129.0	49.72	38.6	128.8	47.90	42.6	112.4	43.78	39.4	111.7	49.60	41.0	120.8	47.59	42.7	111.3
March	52.72	40.5	130.0	52.23	40.0	130.5	48.71	43.0	113.2	44.95	40.3	111.6	50.50	41.2	122.6	47.85	42.9	111.5
April	53.52	41.0	130.6	53.01	40.4	131.1	48.41	42.4	114.2	44.85	40.1	112.7	49.79	40.7	122.4	46.84	41.6	112.6
May	54.35	41.0	133.4	54.33	40.5	134.2	51.86	43.4	119.3	45.66	40.2	113.8	49.72	39.8	125.0	46.94	41.1	114.1
Iron and steel and their products—Continued																		
	Tools (except edge tools, machine tools, files, and saws)			Hardware			Plumbers' supplies			Stoves, oil burners, and heating equipment, not elsewhere classified			Steam and hot-water heating apparatus and steam fittings			Stamped and enameled ware and galvanizing		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$24.49	39.7	Cents 61.8	\$23.13	38.9	Cents 59.3	\$25.80	38.2	Cents 67.6	\$25.25	38.1	Cents 66.6	\$26.19	37.6	Cents 69.7	\$23.92	38.1	Cents 62.7
1941: January	29.49	44.7	66.2	25.24	40.9	62.1	27.13	39.0	69.6	26.07	38.7	67.8	30.98	42.5	73.2	26.32	39.4	66.5
1946: May	45.57	43.1	105.7	42.51	41.6	102.1	44.34	40.7	108.9	43.93	39.8	110.6	47.12	40.4	116.6	43.53	40.0	108.8
June	46.31	43.0	107.7	42.79	40.8	105.1	44.24	39.9	110.8	45.56	40.3	113.1	46.35	39.5	117.4	44.19	39.8	111.0
July	46.16	42.5	108.7	43.75	41.2	106.6	43.98	39.0	112.8	44.68	39.6	112.9	46.28	39.5	117.2	43.15	38.7	111.4
August	46.91	42.4	110.6	44.88	41.7	106.9	46.00	40.2	113.8	47.16	40.6	116.1	47.81	40.3	118.6	45.53	40.5	112.5
September	47.59	42.5	112.1	45.11	41.2	109.5	45.63	39.4	115.7	47.36	40.2	117.8	49.72	40.8	121.9	45.49	39.6	115.0
October	49.01	42.9	114.1	46.24	41.9	110.5	48.64	41.4	117.4	48.89	41.0	119.2	51.45	41.1	125.2	46.83	40.7	115.0
November	49.03	42.4	115.8	45.65	41.3	110.6	48.06	40.7	118.3	48.64	40.6	119.9	50.83	40.6	125.3	46.10	39.7	116.1
December	50.02	43.3	115.6	46.42	41.7	111.3	49.68	41.4	120.2	49.61	41.3	120.1	48.78	39.9	122.2	48.30	41.1	117.6
1947: January	50.39	43.3	116.4	47.04	41.6	111.9	51.27	42.3	121.9	50.26	41.1	122.4	50.12	40.7	123.1	47.57	40.5	117.6
February	49.54	42.6	116.4	47.45	41.9	113.1	48.51	39.9	121.5	49.02	40.2	122.0	50.31	40.7	123.5	46.71	39.6	117.9
March	49.93	42.9	116.3	47.29	41.7	113.5	49.90	40.7	122.7	49.79	40.6	122.6	51.02	40.9	124.6	48.14	40.3	119.3
April	50.48	42.9	117.6	47.90	41.5	115.3	50.22	40.6	123.6	50.11	40.7	123.0	51.87	40.7	126.9	48.44	40.3	120.1
May	50.86	42.5	119.8	48.96	41.7	117.5	49.92	40.0	124.7	50.38	40.2	124.9	51.67	40.2	128.1	49.86	39.8	125.0

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Iron and steel and their products—Continued																	
	Fabricated structural and ornamental metalwork			Metal doors, sash, frames, molding, and trim ²			Bolts, nuts, washers, and rivets			Forgings, iron and steel			Screw-machine products and wood screws			Steel barrels, kegs, and drums ³		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....																		
1941: January.....																		
1946: May.....																		
June.....																		
July.....																		
August.....	\$27.95	38.5	72.7				\$26.04	37.7	69.0	\$29.45	38.4	76.7						
September.....	31.01	41.8	74.3				29.58	41.9	70.6	36.75	45.0	81.8						
October.....																		
November.....	46.83	40.3	116.8	\$45.49	40.7	111.7	41.20	36.9	111.0	50.11	38.4	130.6	\$47.48	41.7	113.8	\$45.30	41.1	110.1
December.....	46.59	39.8	117.7	47.08	41.8	112.5	44.29	39.2	112.6	51.16	39.1	130.8	48.74	41.8	116.7	44.32	40.4	109.8
1947: January.....	46.38	39.3	118.5	49.59	41.3	120.1	41.59	36.6	113.0	49.72	37.8	131.4	48.69	41.5	117.4	42.94	38.2	112.5
February.....	48.69	40.7	119.6	50.23	41.2	121.8	46.41	40.4	114.3	53.94	40.0	134.9	50.65	42.8	118.4	47.06	41.7	113.0
March.....	48.85	40.6	120.3	52.13	41.1	126.9	45.70	38.9	116.7	54.22	39.5	136.3	50.57	42.3	119.6	45.46	39.8	114.3
April.....	49.74	41.0	121.4	51.58	41.6	124.0	46.89	39.7	117.6	55.86	40.4	138.3	52.13	43.3	120.4	47.02	41.1	114.4
May.....	48.06	39.6	121.3	51.45	40.8	126.1	48.87	41.0	118.9	56.22	40.1	140.1	51.50	42.5	121.2	50.16	42.3	118.5
	51.10	41.7	122.5	53.54	42.8	124.9	48.76	40.8	119.2	58.04	40.9	141.8	52.19	42.9	121.6	50.68	42.8	118.3
	49.82	40.5	122.9	51.06	41.8	122.1	48.83	40.2	121.1	59.01	41.3	143.0	52.21	42.7	122.4	48.41	39.9	121.8
	50.40	41.0	123.0	51.21	41.6	123.0	50.46	41.2	122.2	59.78	41.5	144.0	51.99	42.5	122.4	50.95	40.9	124.6
	51.73	41.7	124.0	53.56	42.3	126.8	50.28	40.9	122.7	60.42	41.7	144.8	53.42	43.0	124.3	50.85	41.0	124.2
	51.94	41.6	124.6	52.99	41.5	127.6	50.72	41.4	122.3	59.68	41.3	144.3	52.73	42.5	124.2	51.16	40.9	125.2
	53.07	41.8	126.9	56.06	42.9	130.7	53.44	42.1	126.7	60.49	41.6	146.4	53.37	42.3	126.2	51.75	40.5	127.9
Year and month	Iron and steel and their products—Con.						Electrical machinery						Machinery, except electrical					
	Firearms ⁴			Total: Electrical machinery			Electrical equipment			Radios and phonographs			Communication equipment			Total: Machinery, except electrical		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$27.28	41.3	66.0	\$27.09	38.6	70.2	\$27.95	38.7	72.2	\$22.34	38.5	58.1	\$28.74	38.3	75.1	\$29.27	39.3	74.6
1941: January.....	35.09	48.6	72.2	31.84	42.4	75.1	33.18	43.4	76.5	24.08	38.2	63.2	32.47	41.4	78.4	34.36	44.0	78.1
1946: May.....	50.54	41.0	122.7	43.99	38.9	113.1	45.49	39.3	115.8	38.94	37.9	102.8	43.60	38.5	113.2	48.32	40.1	120.4
June.....	51.91	41.2	126.1	45.72	39.8	114.8	46.15	39.3	117.3	40.00	38.9	102.9	49.37	42.2	117.1	50.04	40.9	122.3
July.....	51.06	41.0	124.4	45.59	39.4	115.8	46.31	38.9	118.9	40.40	39.1	103.4	47.80	41.1	116.4	49.76	40.4	123.2
August.....	49.86	40.4	123.5	47.49	40.6	116.9	48.28	40.2	120.2	41.54	39.8	104.4	49.71	42.2	118.1	50.99	40.9	124.6
September.....	53.30	42.3	125.9	48.31	40.8	118.5	49.24	40.5	121.4	42.63	40.0	106.6	50.60	42.2	119.9	51.74	41.1	126.0
October.....	51.10	40.7	125.6	48.28	40.7	118.6	48.92	40.3	121.3	42.88	40.1	107.0	51.36	42.7	120.3	52.57	41.5	126.6
November.....	52.89	40.7	130.1	48.33	40.6	119.1	49.12	40.2	121.1	43.42	40.3	107.6	50.48	42.0	120.3	52.06	40.9	127.3
December.....	53.37	40.5	131.8	49.13	41.1	119.5	49.80	40.7	122.4	44.38	40.9	108.6	51.58	42.7	120.8	52.87	41.4	127.7
1947: January.....	54.15	41.3	131.2	48.63	40.5	119.9	49.64	40.3	123.1	42.33	39.4	107.4	51.48	42.5	121.3	53.12	41.4	128.3
February.....	54.33	41.3	131.5	48.13	40.0	120.3	48.98	39.7	123.2	41.72	38.6	108.0	51.59	42.3	122.2	53.22	41.3	129.0
March.....	55.62	41.7	133.5	49.07	40.5	121.2	50.28	40.4	124.4	42.37	39.1	108.2	51.52	42.1	122.6	53.82	41.5	129.8
April.....	55.17	41.2	133.9	48.40	40.0	121.0	50.22	40.2	125.0	42.45	38.9	109.2	47.84	40.5	117.9	54.25	41.5	130.8
May.....	56.38	41.3	136.6	50.24	39.8	126.4	52.65	40.1	131.4	44.57	39.1	113.9	46.52	39.1	118.9	55.21	41.3	133.6
Year and month	Machinery, except electrical—Continued																	
	Machine and machine-shop products			Engines and turbines			Tractors			Agricultural machinery, excluding tractors			Machine tools			Machine-tool accessories ⁵		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$28.76	39.4	73.0	\$28.67	37.4	76.7	\$32.13	38.3	83.9	\$26.46	37.0	71.6	\$32.25	42.9	75.2	\$31.78	40.9	77.7
1941: January.....	34.00	43.7	77.7	36.50	44.1	82.7	36.03	41.5	86.8	29.92	39.5	75.7	40.15	50.4	79.7	37.90	50.0	75.8
1946: May.....	47.86	40.4	118.0	51.42	40.1	128.2	42.68	34.4	124.2	43.51	36.8	118.3	52.01	41.6	125.1	54.74	41.7	131.3
June.....	49.70	41.2	120.2	52.43	40.0	132.0	50.58	39.1	129.3	47.77	39.6	121.0	53.86	42.2	127.7	56.36	42.3	133.1
July.....	49.49	40.7	121.2	52.86	40.3	131.3	49.73	37.9	131.1	47.55	39.7	119.9	42.44	41.3	126.9	54.63	41.1	133.0
August.....	51.15	41.6	122.8	51.95	39.0	132.8	51.01	39.1	130.3	48.66	39.9	122.4	54.07	42.0	129.1	56.89	41.8	136.1
September.....	51.05	41.2	123.8	55.26	40.5	136.5	51.21	39.3	130.2	50.42	40.4	124.7	54.45	41.9	130.0	58.76	42.5	138.0
October.....	51.91	41.6	124.5	55.38	41.1	136.5	52.28	40.2	130.2	50.34	40.4	124.5	55.61	42.6	130.6	58.70	42.6	137.8
November.....	51.38	41.1	124.9	55.57	40.5	137.0	52.53	40.3	130.4	49.65	39.8	124.8	55.90	42.3	132.2	58.08	42.1	138.0
December.....	52.62	41.8	125.7	56.88	41.5	137.1	51.99	40.1	129.7	49.75	39.8	125.1	56.66	42.8	132.2	59.71	43.2	138.1
1947: January.....	52.78	41.7	126.4	56.08	41.0	136.8	51.96	39.5	131.5	49.84	39.9	125.0	56.17	42.2	132.6	58.43	42.5	137.9
February.....	52.61	41.5	126.7	56.37	41.1	137.2	51.96	39.8	130.5	51.59	40.6	127.2	56.09	42.3	132.5	58.16	41.8	139.2
March.....	53.10	41.6	127.5	56.92	41.2	138.2	52.99	40.3	131.4	51.78	40.1	129.2	56.46	42.3	133.4	58.40	42.1	138.9
April.....	53.31	41.6	127.9	57.27	41.3	139.4	54.73	40.3	135.8	51.93	40.3	128.9	56.06	42.0	133.4	58.66	41.8	140.4
May.....	54.44	41.6	130.7	58.74	41.2	142.8	57.46	40.0	143.3	53.12	39.8	132.7	57.13	42.1	135.7	58.92	41.7	141.4

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Machinery, except electrical—Continued																	
	Textile machinery			Typewriters ²			Cash registers, adding and calculating machines			Washing machines, wringers and driers, domestic ³			Sewing machines, domestic and industrial			Refrigerators and refrigeration equipment		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$26.19	39.8	66.0	\$23.98	37.3	64.3	\$30.38	37.2	81.2									
1941: January	30.13	44.6	67.7	26.40	39.1	67.5	34.78	41.4	84.6									
1946: May	48.32	43.3	111.6	45.33	42.8	105.8	55.03	41.4	133.3	\$38.37	37.2	103.3	\$49.48	43.6	115.1	\$47.89	39.4	121.7
June	46.99	41.9	112.3	45.08	42.3	106.5	56.00	42.0	133.8	43.81	40.2	109.0	50.40	43.6	116.5	46.64	38.6	120.8
July	47.42	41.4	114.4	46.49	41.7	111.6	56.29	41.9	134.9	44.99	40.7	110.5	49.58	43.1	115.6	46.77	38.6	121.0
August	48.28	41.9	115.2	46.01	41.1	111.9	52.84	39.9	133.8	46.30	41.2	112.4	52.27	42.1	124.8	48.46	39.7	122.2
September	49.43	42.6	116.1	47.19	41.7	113.2	57.91	42.6	137.0	47.87	41.7	114.7	51.15	40.4	127.4	49.54	40.1	123.5
October	50.26	42.9	117.3	47.89	41.9	114.3	57.34	42.3	136.6	49.60	42.7	116.1	52.63	41.2	128.2	49.71	40.2	123.7
November	49.60	41.8	118.6	48.98	42.1	116.5	58.42	41.8	140.6	45.76	39.6	115.5	52.63	40.8	129.1	47.67	38.4	124.1
December	52.12	43.5	119.9	47.41	40.6	116.9	56.37	40.7	139.1	48.43	41.5	116.8	54.13	41.7	130.2	47.56	38.1	124.9
1947: January	53.15	43.2	122.9	47.56	40.8	116.5	57.14	41.1	139.9	52.31	42.4	122.5	54.02	41.5	130.7	51.59	40.4	126.7
February	53.67	43.1	124.5	47.95	40.9	117.1	60.47	42.7	142.7	49.21	40.4	121.8	54.61	41.6	131.5	49.30	38.2	127.6
March	53.86	43.2	124.8	48.13	40.9	117.6	60.68	42.5	143.9	52.31	42.1	124.1	55.28	42.0	132.1	51.77	40.0	128.1
April	53.14	42.5	125.1	49.29	41.2	119.7	61.83	42.4	146.9	53.59	42.6	125.8	54.46	41.2	132.8	54.16	40.7	131.9
May	54.05	42.7	127.0	50.75	41.6	121.9	61.68	42.3	146.8	54.89	42.3	129.1	55.00	41.0	134.7	54.03	40.4	132.4
Transportation equipment, except automobiles																		
	Total: Transportation equipment, except automobiles			Locomotives			Cars, electric and steam-railroad			Aircraft and parts, excluding aircraft engines			Aircraft engines			Shipbuilding and boatbuilding		
			Cents			Cents			Cents			Cents			Cents			Cents
1939: Average	\$30.51	38.9	78.5	\$28.33	36.7	77.1	\$26.71	36.0	74.1	\$30.34	41.5	74.5	\$36.58	44.1	83.5	\$31.91	38.0	83.5
1941: January	35.69	43.1	82.8	34.79	42.8	81.4	29.57	38.5	76.8	34.13	44.7	77.6	42.16	47.2	89.2	37.69	42.0	89.3
1946: May	52.09	39.1	133.3	55.96	38.7	144.6	47.44	39.7	119.6	51.63	40.7	126.8	55.26	41.3	133.9	52.79	37.6	140.3
June	53.32	39.5	135.0	58.91	40.5	145.6	49.17	40.8	120.5	52.55	40.4	130.2	55.91	41.6	134.3	53.99	38.1	141.6
July	53.70	39.3	136.6	59.18	40.5	146.0	48.21	39.6	121.9	53.01	40.0	132.5	54.72	40.6	134.8	55.20	38.4	143.6
August	53.91	39.7	135.9	57.27	39.8	143.9	50.23	41.1	122.3	53.85	40.7	132.3	56.08	41.4	135.4	54.41	38.0	143.1
September	52.65	38.8	135.6	57.92	39.6	146.2	49.38	39.9	123.8	53.73	40.6	132.3	56.93	41.9	135.7	50.91	35.7	142.6
October	54.32	40.0	135.9	60.63	41.6	145.6	51.75	41.8	123.9	53.81	40.6	132.6	57.31	42.1	136.3	53.96	37.7	143.2
November	52.37	38.4	136.4	57.22	39.9	143.3	52.46	41.2	127.2	52.53	39.6	132.6	51.06	37.2	137.3	51.47	35.7	144.1
December	55.35	40.6	136.2	59.99	41.5	144.5	52.24	41.5	126.0	53.46	40.4	132.5	56.89	41.9	135.7	57.21	40.0	143.0
1947: January	54.48	40.2	135.6	55.64	39.8	139.7	52.17	40.6	128.3	52.59	39.8	132.1	56.15	41.4	135.7	57.05	40.2	142.0
February	54.34	39.7	136.7	56.97	40.4	141.1	53.42	41.3	129.2	53.41	40.1	133.2	54.77	40.7	134.4	55.37	38.4	144.2
March	54.25	39.8	136.2	51.68	37.4	138.4	53.67	40.8	130.3	53.22	39.8	133.8	53.02	39.4	134.4	56.59	39.9	141.8
April	54.23	39.8	136.2	52.20	37.2	140.2	53.51	40.9	129.8	52.72	39.7	132.6	53.69	39.8	135.1	56.97	39.9	142.6
May	55.23	40.2	137.5	59.36	40.3	147.5	54.51	41.3	130.7	52.63	39.5	132.7	54.76	39.6	138.3	58.21	40.3	143.7
Transportation equipment, except automobiles—Con.																		
	Motoreycles, bicycles, and parts			Automobiles			Total: Nonferrous metals and their products			Smelting and refining, primary, of nonferrous metals			Alloying and rolling and drawing of nonferrous metals except aluminum			Clocks and watches		
			Cents			Cents			Cents			Cents			Cents			Cents
1939: Average				\$32.91	35.4	92.9	\$26.74	38.9	68.7	\$26.67	38.2	69.9	\$28.77	39.6	72.9	\$22.27	37.9	58.7
1941: January				37.69	38.9	96.9	30.47	41.4	73.6	29.21	38.7	75.5	35.96	44.0	81.8	23.90	38.9	61.4
1946: May	\$46.42	39.6	117.3	48.05	36.3	132.5	47.18	41.1	114.9	46.25	40.0	115.6	51.24	41.0	125.1	40.97	41.2	99.5
June	47.05	39.8	118.2	49.32	36.6	134.7	47.61	40.9	116.3	47.45	40.1	118.2	52.53	41.7	125.8	40.70	40.3	101.1
July	44.64	38.2	116.9	51.15	37.8	135.4	46.68	40.0	116.6	47.42	39.9	118.9	50.34	40.2	125.2	40.44	39.8	101.7
August	49.30	40.6	121.5	53.80	39.2	137.3	48.00	40.8	117.7	47.85	40.2	118.9	51.59	40.8	126.6	42.75	41.1	103.9
September	50.95	41.2	123.8	53.37	38.5	138.5	48.55	40.7	119.2	48.65	40.3	120.8	51.39	40.7	126.4	43.68	41.0	106.4
October	53.24	42.6	125.0	53.41	38.8	137.6	48.92	40.9	119.5	47.80	40.0	119.6	51.93	40.7	127.5	44.81	41.6	107.8
November	52.39	41.2	127.0	53.83	38.6	139.4	49.24	40.9	120.4	48.25	39.8	121.2	52.21	40.6	128.7	45.46	41.6	109.3
December	55.23	43.2	127.8	54.98	39.4	139.5	50.40	41.7	121.0	49.75	41.1	121.5	53.69	41.7	128.6	45.39	41.4	109.6
1947: January	50.29	40.5	124.0	54.13	38.9	139.0	49.91	41.0	121.7	49.39	40.4	122.7	53.45	41.3	129.3	43.83	39.7	110.3
February	50.40	40.1	125.8	54.29	38.8	139.9	50.12	41.0	122.2	50.04	40.6	123.4	53.92	41.5	130.0	44.88	41.0	109.6
March	52.43	41.4	126.7	55.45	39.7	139.6	50.26	41.0	122.6	50.66	40.9	123.9	53.68	41.2	130.2	44.83	40.7	110.1
April	52.36	41.3	126.9	54.14	38.5	140.6	50.33	40.8	123.4	51.10	40.9	125.3	53.45	40.9	130.5	44.71	40.4	110.8
May	54.60	41.8	130.7	55.87	38.2	146.1	51.22	40.6	126.1	53.29	41.6	128.2	53.01	39.8	133.0	45.07	40.1	112.4

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Nonferrous metals and their products—Continued												Lumber and timber basic products						
	Jewelry (precious metals) and jewelers' findings			Silverware and plated ware			Lighting equipment			Aluminum manufactures ¹			Total: Lumber and timber basic products			Sawmills and logging camps			
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	
1939: Average.....	\$26.36	39.4	Cents 66.0	\$26.03	40.7	Cents 64.3	\$25.73	37.1	Cents 69.3	\$27.49	39.3	Cents 69.9	\$19.06	39.0	Cents 48.9	\$18.29	38.4	Cents 47.6	
1941: January.....	26.43	39.1	66.4	27.37	41.4	66.6	28.19	39.3	71.7	32.85	42.0	78.2	20.27	38.9	52.1	19.59	38.4	47.6	
1946: May.....	47.40	43.6	108.1	51.31	45.2	113.6	44.59	39.6	112.6	46.86	40.3	116.4	36.01	40.9	88.0	34.71	40.4	86.0	
June.....	47.09	43.3	108.3	51.42	44.8	114.7	45.00	39.2	114.7	46.14	39.5	116.7	37.62	41.5	90.8	36.56	41.1	88.8	
July.....	44.69	42.0	105.7	50.29	43.9	114.6	44.44	38.2	116.3	45.98	39.1	117.6	35.60	39.1	91.0	34.66	38.9	89.2	
August.....	46.72	42.7	108.8	52.67	45.2	116.6	45.40	39.0	116.5	46.73	39.7	117.6	38.78	41.8	92.8	37.75	41.4	91.1	
September.....	48.93	43.5	112.4	55.48	45.9	121.0	46.10	39.1	117.8	47.32	39.5	119.7	38.73	41.4	93.5	37.69	41.2	91.5	
October.....	49.91	43.8	114.6	56.42	46.1	122.2	45.92	39.1	117.5	46.94	39.4	119.2	39.21	41.9	93.6	37.84	41.5	91.3	
November.....	49.31	42.6	114.9	55.70	45.2	123.4	47.13	40.0	117.8	48.15	40.0	120.4	37.74	40.6	93.1	36.37	40.2	90.6	
December.....	51.76	44.6	115.2	58.27	46.8	124.9	46.74	39.5	118.4	48.34	40.6	121.1	38.79	41.7	93.1	37.05	41.1	90.1	
1947: January.....	48.84	42.4	115.7	57.86	46.2	125.4	47.91	39.9	120.0	48.11	40.0	120.4	39.11	40.6	96.2	37.41	40.0	93.5	
February.....	48.37	42.1	115.4	57.34	45.6	125.8	48.92	40.4	121.0	47.60	39.2	121.3	41.18	42.1	97.9	39.89	41.8	95.4	
March.....	48.47	41.7	116.7	58.35	45.7	127.8	47.59	39.4	120.9	48.71	40.1	121.3	40.31	41.0	98.3	39.12	40.6	96.5	
April.....	47.09	41.0	115.9	58.01	45.6	127.5	47.63	39.2	121.5	48.55	39.7	122.1	40.99	41.4	99.0	39.81	40.9	97.2	
May.....	47.62	40.5	118.0	58.50	45.8	127.8	50.87	39.5	128.2	48.52	39.2	124.2	42.93	41.9	102.4	41.80	41.5	100.6	
Lumber and timber basic products—Con.																			
Planing and plywood mills			Total: Furniture and finished lumber products			Furniture			Caskets and other morticians' goods			Wood preserving			Total: Stone, clay, and glass products				
1939: Average.....	\$22.17	41.1	Cents 54.0	\$19.95	38.5	Cents 51.8	\$20.51	38.9	Cents 53.0			Cents			Cents	\$23.94	37.6	Cents 63.7	
1941: January.....	22.51	40.5	55.4	20.90	38.7	54.0	21.42	39.0	55.2							25.02	37.4	66.9	
1946: May.....	40.27	42.6	94.4	37.88	41.3	91.7	38.87	41.3	94.3	\$40.95	42.4	96.3	\$33.73	39.7	85.0	41.00	40.2	101.9	
June.....	41.11	42.5	96.8	38.73	41.8	92.7	39.31	41.4	95.0	41.09	42.9	96.9	35.91	41.9	85.7	42.01	40.4	104.1	
July.....	38.71	40.0	96.5	38.37	41.0	93.7	38.80	40.6	95.7	40.23	41.5	96.4	36.15	40.9	88.4	41.80	39.5	105.7	
August.....	42.17	42.9	98.2	40.09	41.9	95.7	40.85	41.7	98.2	40.74	42.0	96.6	36.84	41.2	89.4	43.23	40.7	106.3	
September.....	42.04	42.2	99.5	40.86	41.8	97.7	41.62	41.6	100.2	42.74	42.8	100.2	38.01	41.5	91.7	44.03	40.5	108.7	
October.....	43.49	43.2	100.5	41.73	42.2	99.0	42.42	41.8	101.4	42.66	42.5	100.3	38.24	41.6	91.9	44.46	40.6	109.6	
November.....	41.86	41.8	100.4	41.62	41.7	99.9	42.41	41.4	102.4	43.14	41.5	103.5	38.90	41.8	93.1	44.91	40.3	111.4	
December.....	44.12	43.4	101.4	42.49	42.2	100.7	43.04	41.6	103.4	45.02	43.2	103.7	38.66	42.0	92.1	45.89	41.0	111.9	
1947: January.....	44.11	42.5	103.9	42.41	41.8	101.5	43.35	41.5	104.6	45.02	42.7	105.2	*37.55	*40.4	92.2	45.58	40.5	112.5	
February.....	45.13	42.9	104.9	42.80	41.9	102.2	44.20	42.0	104.9	44.79	42.1	106.0	*38.49	*40.9	*94.0	45.49	40.1	113.3	
March.....	46.10	42.8	105.4	43.00	41.7	103.1	44.33	41.9	105.9	45.67	42.3	107.7	38.90	40.8	95.3	46.38	40.5	114.4	
April.....	45.82	43.4	105.5	42.84	41.5	103.1	44.07	41.4	106.3	45.36	41.9	107.6	40.16	41.9	96.0	46.55	40.5	114.9	
May.....	47.70	43.6	109.3	43.39	41.5	104.5	44.34	41.2	107.3	46.86	42.0	110.7	41.58	43.0	96.7	47.34	40.3	117.4	
Stone, clay, and glass products—Continued																			
Glass and glassware			Glass products made from purchased glass			Cement			Brick, tile, and terra cotta			Pottery and related products			Gypsum				
1939: Average.....	\$25.32	35.2	Cents 72.1				\$26.67	38.2	Cents 69.9	\$20.55	37.8	Cents 54.3	\$22.74	37.2	Cents 62.5			Cents	
1941: January.....	28.02	36.3	77.2				26.82	37.9	70.9	21.74	36.9	58.7	22.92	36.4	63.5				
1946: May.....	42.29	39.0	108.1	\$38.55	43.4	86.6	43.67	42.1	103.7	36.79	38.5	95.5	37.94	39.7	96.6	\$45.41	45.8	99.2	
June.....	42.16	38.7	108.9	38.22	41.2	91.4	43.10	41.4	104.2	39.05	40.0	97.9	40.69	39.5	104.0	48.02	47.2	101.6	
July.....	41.87	38.0	110.2	37.33	40.4	90.2	44.66	41.7	107.2	39.44	39.8	99.1	38.84	36.5	106.8	46.40	44.3	104.8	
August.....	43.14	39.4	109.5	39.60	42.1	91.7	45.63	42.3	107.9	40.67	40.0	101.2	41.34	38.5	107.9	50.45	47.2	106.9	
September.....	45.29	39.5	114.7	38.88	40.5	93.8	47.03	42.9	109.7	41.28	40.3	102.0	41.33	38.2	108.6	50.46	46.6	108.4	
October.....	45.71	39.4	116.1	40.29	40.9	96.4	46.02	42.4	108.5	42.25	40.9	102.7	41.89	38.4	109.6	52.04	47.8	108.8	
November.....	46.72	39.2	119.4	41.35	41.2	97.7	46.18	42.2	109.5	42.08	40.3	103.5	41.56	37.9	110.0	50.89	46.2	110.2	
December.....	47.96	39.9	120.3	42.53	42.0	99.8	46.12	42.4	109.0	42.57	40.7	104.0	42.82	38.6	111.0	51.39	46.8	109.9	
1947: January.....	47.78	39.4	121.4	42.36	42.0	99.3	43.79	40.6	107.9	42.22	40.3	104.1	41.97	37.7	112.1	51.49	46.2	111.4	
February.....	46.85	38.6	121.6	43.28	41.7	102.7	44.67	41.5	107.7	42.35	40.0	105.6	42.69	37.2	114.9	51.14	45.9	111.4	
March.....	48.45	39.6	122.6	43.09	41.1	102.1	45.12	41.6	108.5	42.78	40.1	106.3	44.26	38.3	115.7	51.95	46.3	112.2	
April.....	48.89	39.7	123.2	42.96	40.6	103.3	45.82	42.1	108.9	42.58	39.7	106.2	44.42	38.9	115.5	50.45	45.2	111.6	
May.....	48.66	39.3	123.9	44.20	40.8	105.9	44.22	39.0	113.3	45.56	40.6	112.8	45.51	39.0	117.5	52.05	45.8	113.5	

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Stone, clay, and glass products—Continued												Textile-mill products and other fiber manufactures					
	Lime			Marble, granite, slate, and other products			Abrasives			Asbestos products			Total: Textile-mill products and other fiber manufactures			Cotton manufactures, except smallwares		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average			Cents	\$26.18	36.9	Cents			Cents	\$24.43	39.0	Cents	\$16.84	36.6	46.0	\$14.26	36.7	38.9
1941: January				24.29	34.6	70.8				27.26	41.3	66.0	18.01	36.9	48.8	15.60	37.2	41.9
1946: May	\$40.28	44.7	89.5	43.47	42.9	101.3	\$45.11	39.3	114.8	47.42	42.8	110.7	34.80	39.8	87.3	31.58	39.3	80.3
June	42.06	45.2	91.6	42.51	42.3	100.0	46.78	40.3	116.1	48.18	42.8	112.5	35.02	40.0	87.5	31.75	39.5	80.3
July	42.11	44.9	93.2	42.44	41.9	100.4	47.02	39.9	117.9	48.70	42.9	113.6	34.76	39.6	87.7	31.64	39.4	80.3
August	45.27	46.6	96.7	43.68	43.0	101.0	46.63	39.9	116.8	49.56	43.5	113.9	37.00	40.1	92.4	34.81	39.8	87.5
September	45.66	46.9	97.4	42.64	41.6	102.2	45.35	38.0	119.4	49.19	42.9	114.5	37.54	40.0	94.0	35.35	39.8	88.8
October	45.12	46.6	96.6	44.18	42.9	102.6	45.11	38.1	118.5	49.86	42.0	118.7	38.09	40.2	94.8	35.57	39.9	89.2
November	45.69	46.2	98.8	42.76	41.6	103.4	48.45	39.9	121.4	50.18	41.9	119.8	38.38	40.2	95.5	36.14	40.3	89.8
December	46.06	46.7	98.2	44.26	42.4	104.9	40.38	41.6	121.2	50.79	42.7	118.8	39.26	40.9	95.9	36.85	40.9	90.0
1947: January	43.83	44.7	98.3	43.88	42.1	104.5	52.70	43.2	122.0	51.91	43.2	120.2	39.29	40.5	97.0	37.06	40.6	91.4
February	44.80	45.3	98.1	44.18	41.9	105.6	49.46	40.7	121.6	52.73	43.9	120.1	40.32	40.4	99.7	37.56	40.5	92.7
March	45.70	46.2	98.6	45.30	42.0	107.5	50.63	40.4	125.4	53.03	43.8	121.0	41.01	40.0	102.4	39.22	40.1	97.9
April	46.53	46.6	99.4	45.51	42.1	107.9	49.72	39.7	125.3	52.46	42.8	122.5	40.12	39.1	102.7	38.53	39.3	98.1
May	45.95	44.7	101.7	46.20	42.7	107.5	50.10	39.6	126.4	52.58	42.6	123.5	39.89	38.9	102.5	37.73	38.8	97.4
Textile-mill products and other fiber manufactures—Continued																		
	Cotton small wares			Silk and rayon goods			Woolen and worsted manufactures, except dyeing and finishing			Hosiery			Knitted cloth			Knitted outerwear and knitted gloves		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$18.22	39.0	47.4	\$15.78	36.5	42.9	\$19.21	36.4	52.8	\$18.98	35.6	53.6	\$18.15	38.4	46.8	\$17.14	37.0	46.1
1941: January	19.74	39.3	50.3	16.53	35.7	46.1	21.78	37.9	57.6	18.51	33.8	55.0	19.90	37.9	50.3	17.65	35.8	48.9
1946: May	35.21	40.3	87.4	35.11	41.3	84.9	41.67	41.1	101.4	33.77	38.0	88.8	37.98	41.8	90.2	35.60	39.8	88.1
June	36.41	40.8	89.3	34.64	40.8	85.0	41.63	41.1	101.4	33.89	38.1	88.9	39.41	43.1	90.9	35.31	39.6	87.9
July	37.44	41.2	90.9	34.94	40.7	85.8	41.18	40.5	101.7	33.47	37.2	89.9	38.98	42.3	92.3	33.73	38.6	87.0
August	38.67	41.0	94.2	37.42	41.3	90.6	41.88	40.9	102.4	35.96	38.1	94.6	39.20	42.2	92.9	34.35	38.6	88.1
September	38.33	40.5	94.7	37.20	40.4	92.2	42.44	41.1	103.4	36.65	37.7	97.4	39.85	41.9	95.1	35.84	38.6	91.8
October	39.00	40.6	96.1	38.67	41.6	93.1	42.40	40.9	103.7	37.65	38.3	98.2	39.94	41.7	95.7	36.69	39.4	92.2
November	38.09	39.7	96.1	38.69	41.1	94.1	41.67	40.1	103.8	38.4	39.5	99.9	39.99	40.9	96.7	37.14	39.5	93.0
December	39.64	41.0	96.7	39.57	41.8	94.4	42.96	41.3	103.9	39.05	38.8	100.6	39.26	40.2	97.2	36.74	39.2	92.8
1947: January	40.48	41.0	98.7	40.21	41.1	97.5	43.10	41.3	104.5	38.35	38.1	100.7	39.03	40.9	95.4	36.49	38.4	94.4
February	40.59	40.5	100.4	41.45	41.6	99.6	47.44	41.0	115.6	38.40	38.1	100.9	40.89	41.3	98.9	36.68	38.4	94.8
March	40.69	40.4	100.8	41.94	41.5	101.2	46.28	40.1	115.5	38.41	37.8	101.6	41.00	41.6	98.6	36.75	38.5	94.7
April	40.11	39.5	101.7	40.89	40.2	101.6	45.26	39.1	115.9	36.36	35.9	101.0	39.79	40.0	98.7	35.58	37.3	95.2
May	40.08	39.4	101.9	41.80	41.0	102.0	45.28	39.2	115.8	36.47	35.9	101.7	40.06	40.3	98.5	35.51	37.6	93.9
Textile-mill products and other fiber manufactures—Continued																		
	Knitted underwear			Dyeing and finishing textiles, including woolen and worsted			Carpets and rugs, wool			Hats, fur-felt			Jute goods, except felts			Cordage and twine		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$15.05	36.9	41.0	\$20.82	38.6	53.5	\$23.25	36.1	64.4	\$22.73	32.2	70.7						
1941: January	16.06	36.0	44.6	21.65	39.3	55.1	25.18	37.3	67.5	27.12	36.2	75.5						
1946: May	29.64	37.6	78.3	30.00	41.4	94.2	40.98	40.3	101.8	49.78	41.1	120.3	\$36.48	44.1	84.0	\$33.36	39.8	83.7
June	30.60	38.4	79.2	40.64	42.9	94.8	41.64	40.8	102.4	49.57	40.8	121.4	36.47	43.9	84.4	34.68	40.8	84.8
July	31.00	38.1	81.0	39.66	41.9	94.5	41.03	40.0	102.7	48.38	39.3	123.3	36.39	42.2	87.8	34.43	40.2	85.6
August	31.79	38.1	83.0	40.92	42.1	97.1	42.10	40.4	104.3	52.93	39.7	135.2	38.23	43.4	89.7	37.17	41.3	90.1
September	32.70	38.1	85.2	40.72	41.4	98.3	43.72	41.3	106.1	53.25	40.9	130.0	39.47	44.0	91.2	37.86	41.4	91.4
October	33.05	38.4	85.5	42.69	42.3	100.8	46.01	41.1	112.2	52.92	40.6	130.2	39.52	43.7	91.8	37.63	40.9	92.2
November	33.31	38.7	85.9	43.54	42.2	103.3	46.83	41.2	113.9	52.83	40.2	130.9	39.68	43.8	92.0	37.94	40.3	94.3
December	34.26	39.3	86.8	45.38	43.6	104.2	47.86	41.8	114.7	53.70	41.3	129.9	40.57	44.4	92.9	39.08	41.4	94.4
1947: January	33.70	38.7	86.9	45.67	43.3	105.5	46.51	40.7	114.5	50.15	39.1	127.7	40.09	43.9	92.8	39.14	41.1	95.1
February	34.22	38.8	88.1	45.75	42.9	106.5	46.51	40.5	114.9	49.60	38.9	127.2	41.74	43.4	97.9	39.51	41.0	96.4
March	34.86	38.7	89.9	46.12	42.6	108.3	47.12	40.8	115.8	49.22	38.0	129.7	41.57	43.2	97.9	40.00	40.6	98.4
April	34.22	38.3	89.1	45.95	41.3	111.4	47.69	40.4	118.1	47.28	36.3	130.0	40.98	42.7	97.7	40.23	40.5	99.2
May	35.18	39.0	90.4	45.62	41.1	110.8	48.11	41.2	117.0	46.81	36.4	128.9	42.12	43.4	98.5	39.11	39.2	99.6

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Apparel and other finished textile products																	
	Total: Apparel and other finished textile products			Men's clothing, not elsewhere classified			Shirts, collars, and nightwear			Underwear and neckwear, men's			Work shirts			Women's clothing, not elsewhere classified		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$18.17	34.5	52.7	\$19.32	33.2	58.1	\$13.75	34.6	39.8	\$14.18	35.4	40.1	\$11.03	35.8	36.7	\$19.20	33.9	51.9
1941: January	18.76	33.5	56.0	20.40	33.4	60.7	14.22	33.0	43.1	14.85	33.6	44.2	12.33	33.6	36.7	19.47	33.2	55.3
1946: May	35.28	36.9	95.6	37.68	37.6	99.7	28.92	37.0	77.7	29.96	35.7	83.9	22.47	35.6	63.1	45.10	36.4	121.1
June	35.23	37.1	95.1	38.18	38.1	99.9	28.73	37.1	77.0	30.56	36.4	83.9	22.62	35.2	64.2	44.02	36.1	119.1
July	33.83	36.0	94.1	35.84	36.2	98.5	27.90	36.1	76.9	29.90	36.4	82.2	22.30	34.4	64.8	42.67	35.4	118.0
August	36.48	37.0	98.6	38.11	37.5	100.9	28.76	36.8	78.2	31.53	37.5	84.0	23.48	35.7	65.8	47.45	36.4	126.3
September	37.25	36.9	101.0	39.14	37.7	102.7	29.62	37.0	79.9	33.13	37.9	87.5	23.55	34.5	68.2	47.82	35.8	130.0
October	36.68	36.8	99.7	38.89	37.7	102.4	30.39	37.4	80.9	33.32	37.5	88.9	24.00	34.8	69.0	46.25	35.5	126.6
November	36.54	36.6	99.8	41.39	37.8	108.6	32.04	37.6	84.7	34.78	38.6	90.1	26.01	36.6	71.2	43.28	34.9	121.1
December	37.23	37.0	100.6	41.78	38.1	108.9	33.22	38.1	86.8	33.68	36.9	91.3	26.72	36.9	72.4	44.14	35.3	122.3
1947: January	38.22	36.9	103.7	41.70	37.8	109.5	32.17	37.1	86.9	33.37	36.7	90.8	25.43	34.7	73.1	47.30	35.7	129.7
February	38.74	36.9	104.9	41.86	37.8	109.7	32.32	37.2	86.9	33.49	36.6	91.5	25.69	35.8	71.6	48.77	36.2	131.4
March	38.41	36.7	104.5	41.99	37.6	110.6	32.11	37.0	86.9	34.35	36.5	94.0	25.37	34.3	73.3	47.75	36.1	129.3
April	35.44	35.5	99.9	40.16	36.6	109.5	31.62	36.5	86.8	32.18	34.3	93.7	25.09	34.2	72.8	42.32	34.4	120.0
May	35.36	35.8	98.8	41.18	37.2	110.6	32.01	36.9	86.7	32.42	35.1	92.7	25.30	34.3	73.5	41.33	34.7	116.5
Apparel and other finished textile products—Continued																		
	Corsets and allied garments ²			Millinery			Handkerchiefs			Curtains, draperies, and bedspreads			Housefurnishings, other than curtains, etc.			Textile bags ³		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$17.15	37.5	45.6	\$22.19	33.8	63.6												
1941: January	17.24	35.6	48.2	22.31	30.5	64.8												
1946: May	33.10	38.4	86.4	38.11	32.8	113.9	\$27.61	36.8	75.3	\$28.21	36.7	77.7	\$33.76	38.3	88.1	\$31.26	39.5	79.1
June	33.67	38.7	87.4	42.37	34.4	118.8	27.26	36.0	75.8	28.45	37.3	76.6	31.94	36.5	86.8	32.03	39.5	81.0
July	32.68	37.8	86.7	47.58	36.7	123.5	26.43	34.7	76.4	27.64	36.1	77.0	34.12	38.2	88.9	30.06	37.1	80.6
August	32.90	38.3	85.8	49.04	37.2	125.4	28.61	36.4	78.9	27.58	35.5	78.4	35.38	38.7	91.1	31.53	37.6	83.1
September	33.72	38.2	88.5	50.81	37.3	129.2	28.36	35.0	81.2	28.31	35.8	79.9	36.36	38.9	93.6	32.48	38.5	84.8
October	35.02	38.7	90.7	47.73	36.4	127.3	29.44	36.0	81.9	29.45	36.5	81.7	33.06	36.4	90.3	33.02	39.0	85.2
November	35.29	38.4	91.9	39.98	32.3	119.6	30.89	37.0	83.7	29.52	36.1	82.3	35.91	39.4	90.5	33.29	38.6	86.0
December	35.39	38.6	91.7	42.91	34.5	119.5	31.83	38.2	83.6	28.88	35.0	82.8	35.85	39.5	90.5	34.78	39.7	86.5
1947: January	35.21	37.8	93.0	48.40	36.6	125.6	28.95	35.3	82.1	28.57	34.6	82.5	34.85	38.1	91.0	35.92	39.7	89.1
February	36.04	38.8	93.0	53.73	38.9	131.7	30.60	36.5	84.1	28.51	33.8	84.5	34.91	37.5	92.6	35.13	39.0	88.4
March	36.05	38.7	93.3	51.76	37.5	131.8	31.03	36.5	85.4	28.72	33.8	84.9	34.97	37.2	93.5	34.60	38.2	89.5
April	35.95	38.3	94.0	42.94	33.6	124.1	29.36	34.2	85.7	26.90	31.5	84.8	35.67	37.6	94.4	35.26	38.6	90.8
May	36.11	38.6	93.7	40.54	32.4	121.6	31.62	36.9	85.8	27.58	32.6	84.7	37.36	37.9	98.1	33.28	36.1	90.9
Leather and leather products																		
	Total: Leather and leather products			Leather			Boot and shoe cut stock and findings			Boots and shoes			Leather gloves and mittens			Trunks and suitcases		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$19.13	36.2	52.8	\$24.43	38.7	63.4				\$17.83	35.7	50.3						
1941: January	20.66	37.3	55.4	25.27	38.3	66.2				19.58	37.0	53.0						
1946: May	37.35	39.6	94.2	42.92	40.2	106.7	\$36.00	40.1	90.2	36.77	39.6	92.1	\$31.46	36.0	87.8	\$38.55	40.3	95.1
June	37.34	39.3	95.0	44.51	40.6	109.3	36.24	40.3	90.5	36.14	39.0	92.3	32.26	36.5	88.6	39.04	39.7	97.5
July	36.46	38.2	95.4	44.08	40.1	110.2	35.86	39.8	90.4	35.38	37.8	92.7	32.14	36.5	88.3	36.57	37.1	98.3
August	36.74	37.8	97.2	45.08	40.3	112.0	37.69	40.2	94.0	35.17	36.9	94.5	32.33	36.7	88.3	38.96	39.5	98.3
September	37.49	38.2	98.2	44.60	39.5	112.9	36.48	39.0	93.8	36.18	37.9	95.5	33.68	37.0	91.9	39.56	39.3	100.2
October	37.07	37.5	98.7	44.78	39.7	112.9	36.24	38.7	93.6	35.65	36.9	96.0	33.48	36.9	91.5	40.85	40.0	102.0
November	37.24	37.1	100.4	45.98	40.2	114.4	35.78	37.4	96.1	35.76	36.3	97.8	32.69	35.7	92.3	40.63	39.7	102.0
December	39.83	39.1	101.8	47.71	41.6	115.0	37.32	38.7	97.0	38.65	38.8	99.5	32.16	35.5	91.0	41.70	40.1	103.4
1947: January	40.18	39.3	102.3	48.49	41.3	117.4	37.84	38.8	98.0	39.05	39.1	99.5	32.10	35.0	92.2	40.36	38.7	104.0
February	40.29	39.5	102.1	49.65	41.6	119.3	37.79	38.8	98.4	38.96	39.2	98.9	31.38	35.1	89.6	41.60	39.9	103.8
March	40.11	39.0	102.8	49.88	41.4	120.4	37.87	38.1	99.9	38.91	38.8	99.9	31.52	35.0	90.0	40.87	39.5	103.6
April	39.44	38.3	102.9	49.14	40.7	120.4	37.07	37.8	99.4	37.96	38.0	99.8	31.17	35.0	89.0	41.22	39.1	105.3
May	39.50	38.2	103.3	49.65	40.7	122.0	37.32	37.7	100.6	37.86	37.9	99.8	31.22	34.6	90.4	40.35	38.5	104.6

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Food																	
	Total: Food			Slaughtering and meat packing			Butter ²			Condensed and evaporated milk			Ice cream			Flour		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$24.43	40.3	Cents 60.7	\$27.85	40.6	68.6	\$22.60	46.7	48.4			Cents	\$29.24	46.2	62.6	\$25.80	42.3	60.5
1941: January	24.69	39.0	63.3	26.84	39.3	68.1	22.84	44.6	50.9				29.41	44.2	65.3	25.27	41.0	60.8
1946: May	40.70	42.4	96.1	43.09	40.6	108.7	38.68	46.6	82.3	\$42.60	48.7	87.6	43.03	47.1	89.1	41.88	45.3	92.5
June	41.09	42.3	97.2	43.05	39.3	109.5	39.65	47.0	83.1	44.19	49.9	88.5	44.06	47.4	90.6	44.33	46.6	95.2
July	43.22	43.8	98.6	48.05	43.0	111.5	40.71	47.4	85.6	43.48	48.8	89.1	45.67	48.3	92.3	48.63	48.8	99.7
August	44.34	43.7	101.5	48.37	43.4	111.6	40.67	46.4	87.5	43.55	48.0	90.8	45.71	47.6	93.5	50.37	49.3	102.4
September	43.59	43.0	101.3	41.11	35.9	114.4	41.38	46.7	88.2	43.95	47.6	92.4	46.48	46.8	95.6	52.21	49.1	106.4
October	43.85	42.4	103.5	43.06	37.5	114.7	41.39	46.5	89.2	43.41	46.7	92.9	47.54	47.6	96.8	42.45	48.8	107.6
November	44.84	42.9	104.6	51.15	44.9	113.7	40.09	44.7	89.5	43.16	46.3	93.3	46.86	46.0	97.6	51.77	48.2	107.5
December	46.93	44.4	105.8	51.73	46.4	111.9	42.29	46.9	90.7	44.50	46.5	95.7	48.84	46.6	100.4	54.61	50.3	108.7
1947: January	47.31	43.6	108.4	57.20	47.5	120.6	42.24	46.2	91.7	46.32	46.6	99.5	48.79	46.8	100.5	55.18	49.9	110.6
February	46.40	42.7	108.8	52.82	44.3	119.3	42.44	45.8	92.6	46.64	46.2	101.0	48.04	46.2	99.7	53.08	48.9	108.7
March	46.05	42.3	108.8	49.87	41.9	119.1	43.00	45.5	93.5	47.04	46.2	101.9	47.58	45.7	100.8	53.77	49.3	109.3
April	46.17	42.1	109.7	50.13	41.7	120.3	43.47	46.8	93.2	48.16	46.8	103.0	47.16	45.5	100.3	52.44	47.5	110.5
May	47.71	43.0	111.0	53.31	43.9	121.6	44.14	46.8	94.2	49.52	48.3	102.6	47.18	45.4	100.8	51.77	47.9	108.9
Food—Continued																		
	Cereal preparations			Baking			Sugar refining, cane			Sugar, beet			Confectionery ²			Beverages, non-alcoholic		
			Cents			Cents			Cents			Cents			Cents			Cents
1939: Average				\$25.70	41.7	62.1	\$23.91	37.6	63.6	\$24.68	42.9	58.5	\$18.64	38.1	49.2	\$24.21	43.6	55.6
1941: January				26.46	41.1	64.4	22.73	35.0	65.0	24.03	36.5	63.0	19.19	37.6	51.1	25.28	42.0	60.2
1946: May	\$41.92	40.0	104.7	41.14	44.2	93.1	38.63	40.3	95.9	39.12	38.8	100.9	32.54	38.8	82.3	37.47	42.6	87.0
June	45.52	42.8	106.4	41.42	43.9	94.5	38.59	39.4	97.9	38.39	37.4	102.5	34.85	39.5	86.0	38.73	43.6	88.3
July	43.85	41.5	105.8	43.81	44.8	98.0	39.97	39.3	101.8	40.67	37.3	109.1	33.76	38.6	85.4	40.52	44.7	90.2
August	46.27	42.7	108.3	44.63	45.0	99.4	39.27	39.1	100.4	40.76	38.3	106.5	35.13	39.7	86.6	40.45	44.2	91.1
September	47.15	42.4	111.2	44.60	44.5	100.3	38.35	37.9	101.2	48.87	42.8	114.1	36.14	40.0	87.3	39.87	43.9	90.4
October	48.28	42.0	114.9	45.45	43.6	104.2	37.40	37.4	100.1	40.86	40.5	100.9	35.04	39.5	87.4	39.30	42.4	91.8
November	47.12	40.7	115.7	46.01	44.0	104.5	40.07	40.8	98.2	49.59	48.6	102.1	36.79	39.8	90.5	39.66	42.4	92.8
December	47.81	40.9	117.0	47.55	45.3	105.1	45.62	44.6	102.4	54.35	52.1	104.4	38.19	41.4	90.2	41.37	43.2	94.9
1947: January	48.48	40.5	119.6	46.32	43.9	105.6	38.83	38.8	100.1	44.34	40.5	109.5	37.06	39.8	93.0	41.13	42.7	95.9
February	49.13	41.5	118.4	45.80	43.2	106.0	41.53	39.5	105.2	47.29	40.5	116.9	37.75	39.9	94.9	40.85	42.3	96.5
March	50.03	41.4	120.8	45.17	43.0	105.7	44.40	41.6	106.7	44.79	37.4	119.9	37.87	39.8	95.1	41.25	42.0	97.4
April	48.26	39.6	121.8	45.26	42.5	106.5	47.92	43.7	109.7	44.46	38.6	115.1	37.60	38.9	96.7	42.50	43.1	98.3
May	49.77	40.4	123.2	46.55	43.1	108.3	44.30	41.2	107.4	43.41	38.6	112.5	38.77	39.8	97.6	43.10	43.6	98.5
Food—Continued																		
	Malt liquors			Canning and pre-serving			Total: Tobacco man- ufactures			Cigarettes			Cigars			Tobacco (chewing and smoking) and snuff ³		
			Cents			Cents			Cents			Cents			Cents			Cents
1939: Average	\$35.01	38.3	91.6	\$16.77	37.0	46.4	\$16.84	35.4	47.6	\$20.88	37.2	56.1	\$14.59	34.7	41.9	\$17.53	34.1	51.4
1941: January	34.57	36.4	95.2	16.67	33.0	51.0	17.89	35.7	50.1	22.38	37.3	60.0	15.13	35.0	43.2	18.60	34.9	53.7
1946: May	51.17	41.2	124.1	34.64	39.2	88.7	33.52	39.5	84.8	37.86	41.2	91.9	30.71	38.5	79.4	29.15	37.4	77.9
June	52.27	41.3	126.6	35.78	40.0	89.8	33.83	40.0	84.6	37.78	41.4	91.2	31.25	39.2	79.6	29.86	37.8	79.0
July	54.21	42.0	129.1	38.89	43.2	90.4	33.24	39.1	85.1	36.66	40.1	91.5	31.05	38.6	80.3	29.45	37.1	79.4
August	56.36	42.5	132.4	41.12	42.3	97.6	34.16	38.6	88.5	37.93	38.9	97.5	31.50	38.6	81.4	31.28	37.4	83.7
September	57.45	42.7	134.4	41.50	43.5	96.0	35.25	39.5	89.3	39.25	40.3	97.4	32.69	39.0	83.4	31.87	38.0	83.9
October	56.57	42.5	133.0	40.82	41.7	98.3	36.47	40.3	90.5	41.08	41.6	98.8	33.48	39.6	84.4	32.66	38.7	84.4
November	56.68	42.5	133.3	35.28	37.3	95.0	36.66	39.7	92.4	41.74	41.1	101.5	33.27	38.6	85.7	33.58	39.2	85.7
December	59.74	43.7	136.7	37.93	38.8	98.2	38.12	40.2	94.7	43.03	40.9	105.3	34.85	39.9	87.1	34.25	39.1	87.7
1947: January	57.23	41.9	136.6	36.55	37.6	97.5	36.74	39.2	93.8	41.36	39.7	104.1	33.80	39.0	86.2	33.16	37.6	88.3
February	56.88	41.3	137.5	36.82	37.0	99.7	35.44	37.8	93.7	40.76	39.1	104.3	31.98	37.2	85.6	32.03	36.0	88.9
March	57.83	41.8	138.1	37.40	37.7	99.5	35.21	37.5	93.9	40.23	38.7	103.9	31.72	36.7	85.9	32.79	36.3	90.3
April	59.30	42.7	138.7	38.49	37.8	101.9	34.86	36.8	94.9	38.78	36.8	105.4	31.69	36.6	86.0	34.12	37.5	91.1
May	61.55	43.8	140.3	39.52	38.2	103.6	34.47	36.3	94.9	38.33	36.1	106.1	32.03	37.4	85.3	29.72	31.6	94.4

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Paper and allied products															Printing, publishing, and allied industries		
	Total: Paper and allied products			Paper and pulp			Envelopes ²			Paper bags			Paper boxes			Total: Printing, publishing, and allied industries		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$23.72	40.1	59.2	\$24.92	40.3	62.0							\$21.78	40.2	54.7	\$32.42	37.4	86.6
1941: January.....	25.16	40.0	62.9	27.02	40.8	66.2							22.26	38.8	57.6	33.49	37.8	88.6
1946: May.....	42.10	42.9	98.3	45.20	43.8	103.0	\$40.87	42.5	96.1	\$34.86	40.3	86.8	38.85	42.0	92.7	51.10	40.4	126.6
June.....	42.74	43.0	99.3	45.34	43.7	103.8	41.82	43.1	96.9	36.54	40.9	89.7	39.94	42.4	94.4	51.73	40.5	127.8
July.....	43.12	42.8	100.7	46.06	43.8	105.3	40.61	42.5	95.6	37.42	41.3	91.1	39.93	41.9	95.3	51.79	40.2	128.7
August.....	44.26	43.4	102.0	47.56	44.4	107.0	41.61	42.7	97.5	37.17	40.9	91.1	41.21	42.6	96.8	53.01	40.8	129.9
September.....	44.57	43.0	103.7	47.55	43.8	108.5	41.60	42.6	97.6	37.89	40.9	93.1	41.53	42.2	98.5	53.96	41.0	131.5
October.....	45.61	43.4	105.0	49.05	44.5	110.2	42.15	42.6	98.1	38.98	40.8	96.0	42.02	42.5	99.0	54.28	41.0	132.5
November.....	46.08	43.3	106.4	49.37	44.4	111.1	43.98	42.6	103.1	38.78	40.1	97.0	42.74	42.4	100.9	55.11	41.0	134.3
December.....	46.87	43.7	107.1	49.92	44.6	111.9	44.51	43.0	103.5	39.96	40.7	98.3	43.61	43.2	101.2	57.03	41.5	137.4
1947: January.....	47.05	43.2	108.8	50.18	44.2	113.4	44.68	42.8	104.3	40.52	40.2	100.9	43.58	42.3	103.0	56.60	41.0	138.1
February.....	47.42	43.2	109.8	50.98	44.3	114.9	44.43	42.6	105.6	39.93	39.9	100.1	43.58	42.0	103.9	56.74	40.1	141.5
March.....	47.92	43.2	110.9	51.27	44.3	115.7	44.69	42.7	106.4	40.43	40.3	100.6	44.10	42.1	105.5	58.19	40.3	144.3
April.....	48.20	43.0	112.1	52.07	44.4	117.3	44.94	42.8	106.3	39.69	39.5	100.7	43.98	41.5	106.0	58.81	40.1	146.5
May.....	48.97	43.1	113.5	52.82	44.7	118.4	45.25	43.0	106.5	40.42	39.1	103.6	44.30	41.2	107.7	59.68	40.0	149.1
Printing, publishing, and allied industries—Continued																		
	Newspapers and periodicals			Printing, book and job			Lithographing			Total: Chemicals and allied products			Paints, varnishes, and colors			Drugs, medicines, and insecticides		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$37.58	36.1	100.4	\$30.30	38.3	80.4				\$25.59	39.5	64.9	\$28.48	40.5	70.4	\$24.16	39.7	59.2
1941: January.....	38.15	35.4	105.2	31.64	39.6	81.0				27.53	39.9	69.0	29.86	40.3	74.1	24.68	39.3	61.9
1946: May.....	56.07	38.1	144.3	48.77	41.4	118.6	\$51.92	43.2	120.1	43.31	40.7	106.4	45.94	42.4	108.6	38.13	40.4	94.5
June.....	56.08	37.9	144.9	49.82	41.6	120.3	53.03	43.4	122.1	43.95	40.5	108.4	47.10	42.9	109.9	38.26	40.2	95.3
July.....	56.62	37.9	145.9	50.03	41.5	121.2	51.80	41.8	124.1	44.67	40.7	109.8	46.62	42.2	110.9	38.42	39.7	97.0
August.....	58.09	38.7	147.5	50.83	41.8	122.0	53.97	43.3	124.6	44.91	40.8	110.2	47.41	42.6	111.4	38.91	39.8	97.9
September.....	60.04	39.4	149.5	51.50	42.0	123.2	53.99	42.9	125.8	45.41	40.9	111.0	46.52	41.4	112.4	39.05	39.5	98.7
October.....	60.28	39.3	151.1	51.50	41.7	123.8	55.08	43.4	127.0	45.50	41.3	110.2	47.07	41.6	113.4	39.91	40.2	99.0
November.....	61.11	39.3	152.8	52.60	41.9	125.9	55.76	42.9	129.9	45.88	41.3	111.2	48.16	41.8	115.4	41.06	40.2	101.9
December.....	62.95	39.3	156.9	54.98	42.7	129.5	57.55	44.1	130.6	47.14	41.6	113.3	49.17	42.2	116.6	42.01	40.6	103.5
1947: January.....	62.08	38.9	157.5	54.19	42.0	129.7	57.54	43.5	132.3	47.39	41.5	114.3	49.69	42.1	118.1	41.86	40.4	103.6
February.....	63.00	38.6	160.7	54.07	40.8	133.6	56.55	42.6	132.6	48.17	41.4	116.5	50.34	42.3	119.2	43.15	41.1	105.2
March.....	64.25	38.8	162.6	55.67	41.1	136.4	58.47	41.8	139.8	48.60	41.3	117.7	51.63	42.5	121.6	42.86	41.1	104.4
April.....	65.29	38.9	165.1	56.05	40.8	138.2	58.80	41.8	140.8	48.93	41.0	119.2	51.81	42.5	122.2	42.80	40.6	105.3
May.....	67.10	38.9	169.9	56.32	40.6	139.5	57.73	41.2	140.3	49.77	41.1	121.0	52.36	42.5	123.6	43.19	40.3	107.2
Chemicals and allied products—Continued																		
	Soap			Rayon and allied products			Chemicals, not elsewhere classified			Explosives and safety fuses			Ammunition, small arms			Cottonseed oil		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$28.11	39.8	70.7	\$24.52	37.9	64.6	\$31.30	40.0	78.4	\$29.99	38.8	77.3	\$22.68	39.0	61.2	\$13.70	44.3	30.2
1941: January.....	29.58	40.0	74.0	27.26	39.2	69.6	33.10	40.3	82.2	31.56	37.8	83.5	24.05	38.6	62.3	15.55	44.6	33.8
1946: May.....	46.01	40.5	113.5	40.43	39.4	102.5	50.29	40.7	123.4	46.71	38.8	120.5	40.67	37.2	109.4	29.78	47.5	62.7
June.....	47.60	40.9	116.4	40.09	38.3	104.7	50.69	40.8	124.3	48.53	39.1	123.2	42.10	37.7	111.5	29.42	46.0	64.0
July.....	47.08	41.0	114.8	41.08	38.6	106.5	52.09	41.5	125.6	47.96	38.9	123.3	42.65	38.6	110.6	29.65	47.0	63.1
August.....	47.22	40.7	115.9	42.62	39.1	108.9	51.81	41.1	126.0	48.37	39.1	123.7	39.53	38.7	102.3	30.84	46.9	65.7
September.....	47.30	40.5	116.7	43.55	39.3	110.7	52.61	41.1	128.1	50.98	41.3	123.3	44.05	39.1	112.7	31.93	49.9	64.0
October.....	47.85	41.0	116.6	42.98	39.2	109.7	52.87	41.4	127.8	50.26	40.7	123.4	45.80	40.4	113.3	33.47	51.9	64.5
November.....	48.08	40.8	117.9	43.31	39.1	110.7	52.96	41.1	128.8	49.53	39.8	124.3	46.98	40.9	114.8	35.14	52.6	66.8
December.....	52.93	43.3	123.2	43.76	39.2	111.7	54.15	41.2	131.6	51.68	40.7	127.0	47.38	41.2	115.0	36.49	53.6	68.1
1947: January.....	53.08	42.8	124.1	44.14	39.5	111.7	54.77	41.3	132.7	53.08	41.0	129.5	48.14	41.5	116.1	35.91	52.2	68.8
February.....	53.46	43.1	124.0	47.31	39.3	120.5	55.10	41.0	134.2	50.07	39.4	126.9	48.55	41.4	117.2	35.77	51.7	69.2
March.....	54.12	42.5	127.2	47.92	39.2	122.1	55.33	40.9	135.1	50.60	39.0	129.9	48.27	41.6	116.1	35.69	50.3	70.9
April.....	54.78	42.8	128.1	48.50	39.4	123.3	55.45	40.8	135.9	49.57	37.4	132.5	48.24	41.4	116.4	33.88	48.0	70.6
May.....	55.19	42.2	130.9	48.37	39.5	122.4	56.38	40.9	137.5	53.42	40.3	132.1	49.12	41.2	119.2	35.29	49.2	71.8

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Chemicals and allied products—Continued			Products of petroleum and coal												Rubber products		
	Fertilizers			Total: Products of petroleum and coal			Petroleum refining			Coke and by-products			Roofing materials			Total: Rubber products		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$14.71	35.8	Cents 41.2	\$32.62	36.5	Cents 89.4	\$34.97	36.1	Cents 97.4			Cents			Cents	\$27.84	36.9	Cents 75.4
1941: January	14.89	34.8	42.9	32.46	36.6	88.7	34.46	35.7	97.0							30.38	39.0	77.9
1946: May	31.74	41.7	76.2	52.80	39.3	134.2	56.49	39.8	141.9	\$40.71	34.8	116.9	\$46.66	44.1	105.8	49.82	39.4	126.6
June	32.58	41.7	78.1	53.34	39.6	134.7	56.46	39.5	143.1	43.65	37.5	116.1	48.42	44.8	108.1	50.45	39.3	128.3
July	34.11	42.7	79.8	54.19	40.0	135.5	57.02	39.7	143.7	46.65	38.9	119.5	48.06	44.5	108.0	50.60	39.2	129.2
August	35.09	42.1	83.4	54.36	40.3	134.7	57.10	40.0	142.7	46.77	39.6	117.6	49.61	44.5	111.4	51.03	39.4	129.5
September	35.62	42.3	84.2	55.25	40.4	136.8	58.35	40.2	145.3	47.07	39.4	119.1	48.82	43.6	112.0	53.69	40.6	132.3
October	33.87	41.0	82.7	54.38	40.4	134.7	57.32	40.2	142.8	46.34	39.2	117.7	49.46	44.2	112.0	51.74	39.4	131.3
November	32.97	40.1	82.1	54.50	40.3	135.1	57.11	40.0	142.9	46.64	39.5	117.7	51.10	44.4	115.0	52.93	40.0	132.3
December	34.64	42.1	82.4	54.55	40.0	136.2	57.80	40.4	143.4	43.56	36.7	119.1	50.92	44.1	115.6	54.63	41.1	133.1
1947: January	33.44	41.3	81.0	55.24	40.2	137.2	57.74	39.9	144.7	48.11	39.5	121.2	51.99	44.6	116.7	54.03	40.6	133.0
February	33.44	41.4	80.8	55.39	40.1	138.2	57.75	39.8	145.1	48.88	39.6	123.1	52.59	44.0	119.6	54.06	40.6	133.1
March	34.42	42.3	81.4	56.53	40.2	140.8	59.15	39.8	148.8	48.95	39.6	123.1	53.14	44.6	119.3	52.97	39.8	133.0
April	35.30	42.3	83.5	57.29	40.6	141.0	60.22	40.3	149.0	49.19	39.9	123.2	54.21	44.7	121.1	55.23	39.5	139.7
May	36.76	42.9	85.7	57.97	40.2	144.1	60.01	39.8	150.9	51.93	39.7	130.7	55.40	45.1	122.9	55.98	39.1	143.0
Rubber products—Continued																		
Rubber tires and inner tubes			Rubber boots and shoes			Rubber goods, other			Total: Miscellaneous industries			Instruments (professional and scientific), and fire control equipment			Pianos, organs, and parts			
Cents			Cents			Cents			Cents			Cents			Cents			
1939: Average	\$33.36	35.0	95.7	\$22.80	37.5	60.7	\$23.34	38.9	60.5	\$24.48	29.3	62.4						
1941: January	36.67	37.7	97.5	26.76	41.9	63.9	24.97	39.4	63.9	25.35	39.3	64.5	\$35.33	45.7	77.3			
1946: May	54.72	37.7	144.6	44.19	41.5	106.6	44.01	41.5	106.2	42.08	40.9	102.8	48.18	40.0	121.4	\$44.14	41.1	
June	54.82	37.4	146.1	44.98	41.8	107.6	45.44	41.7	109.1	42.93	41.2	104.2	49.57	40.6	121.1	45.77	42.0	
July	56.11	38.0	147.2	42.98	39.6	108.5	44.93	40.8	110.2	42.42	40.5	104.8	49.06	39.9	122.9	44.04	40.6	
August	55.42	37.4	147.4	44.45	41.2	107.8	46.85	41.8	112.0	43.40	41.0	105.7	49.74	40.2	123.3	46.11	41.3	
September	59.89	39.6	150.7	45.27	41.5	109.1	47.01	41.8	112.5	44.25	41.1	107.6	50.43	40.3	124.3	47.73	42.2	
October	57.38	38.2	149.2	38.93	37.3	104.3	47.00	41.6	113.0	45.04	41.4	108.8	51.23	40.6	125.2	48.31	42.0	
November	58.87	39.0	150.3	43.80	40.4	108.3	46.74	41.4	113.0	45.08	41.1	109.8	51.01	40.1	125.8	50.95	42.8	
December	60.46	39.8	151.3	45.93	42.0	109.3	48.68	42.6	114.3	45.85	41.6	110.3	52.20	40.7	126.0	47.65	40.5	
1947: January	59.78	39.5	151.1	46.06	41.9	109.9	48.12	42.0	114.6	45.98	41.1	112.0	52.00	40.1	127.3	53.37	42.5	
February	59.90	39.3	151.7	45.83	42.0	109.2	48.27	42.1	114.7	46.06	41.0	112.3	51.50	39.7	127.9	53.20	42.3	
March	58.05	38.2	151.2	44.91	41.2	109.0	48.23	41.8	115.4	46.71	41.0	113.9	51.95	39.8	128.6	51.42	41.0	
April	61.64	38.2	160.8	47.03	40.8	115.2	48.53	41.0	118.4	46.35	40.6	114.2	52.10	39.5	130.1	51.73	41.4	
May	61.96	37.9	164.2	48.59	40.6	119.6	48.81	40.6	120.1	46.60	40.3	115.7	51.81	38.9	131.3	53.11	41.4	
Mining																		
Anthracite			Bituminous coal			Metal												
Cents			Cents			Total: Metal			Iron			Copper			Lead and zinc			
Cents			Cents			Cents			Cents			Cents			Cents			
1939: Average	\$25.67	27.7	92.3	\$23.88	27.1	88.6	\$28.93	40.9	70.8	\$26.36	35.7	73.8	\$28.08	41.9	67.9	\$26.39	38.7	
1941: January	25.13	27.0	92.5	26.00	29.7	88.5	30.63	41.0	74.7	29.26	39.0	75.0	30.93	41.8	74.9	28.61	38.2	
1946: May	57.47	41.7	138.2	34.20	27.3	132.1	44.44	39.2	113.3	37.94	32.9	115.4	47.90	42.7	112.1	48.25	42.3	
June	59.58	38.2	155.9	64.44	43.4	147.4	48.13	40.8	118.0	47.41	39.8	119.2	48.96	41.6	117.8	48.13	40.9	
July	49.53	31.7	156.2	52.27	36.0	145.7	47.70	39.6	120.5	48.10	40.2	119.8	50.47	41.2	122.5	43.60	36.2	
August	60.65	37.9	159.8	62.84	42.8	146.6	49.59	40.9	121.2	48.03	40.2	119.4	52.13	42.4	123.1	48.70	39.9	
September	60.67	37.7	161.1	61.65	41.8	148.0	49.53	40.6	122.1	48.45	39.8	121.9	51.09	41.9	122.1	49.47	40.3	
October	61.82	39.2	159.3	62.49	42.9	146.0	49.63	41.0	121.0	48.06	40.3	119.3	51.66	42.3	122.0	49.23	40.2	
November	56.57	35.7	158.2	61.54	41.7	147.7	48.59	39.9	121.9	46.36	38.4	120.7	50.71	41.7	121.7	48.63	39.5	
December	65.82	40.9	161.5	69.56	46.7	149.1	52.04	42.2	123.2	47.89	39.7	120.7	55.46	45.1	122.9	53.69	42.3	
1947: January	62.40	39.1	159.4	69.54	46.7	149.1	50.65	41.2	122.9	46.18	39.1	118.1	54.38	44.0	123.7	52.43	40.9	
February	57.42	35.1	163.7	65.30	43.6	149.1	52.01	42.0	123.8	48.71	40.5	120.3	54.94	44.3	124.1	53.19	41.4	
March	64.84	39.8	163.2	64.90	43.7	148.4	51.63	41.6	124.1	48.54	40.2	120.8	54.58	44.1	123.6	52.62	40.6	
April	49.89	32.3	154.5	54.14	36.4	148.3	51.68	41.8	123.7	48.00	39.9	120.2	54.53	44.1	123.7	53.91	41.8	
May	59.15	37.2	159.3	66.51	44.3	147.0	53.96	42.2	127.8	52.62	40.9	128.6	56.41	44.5	126.9	54.22	41.8	

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Mining—Continued						Public utilities											
	Quarrying and nonmetallic			Crude petroleum production			Telephone			Telegraph ²			Electric light and power			Street railways and busses		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average	\$21.61	39.2	Cents 55.0	\$34.09	38.3	87.3	\$31.94	39.1	82.2			Cents	\$34.38	39.6	86.9	\$33.13	45.9	71.4
1941: January	22.06	38.2	57.6	33.99	37.7	88.5	32.52	39.7	82.4				35.49	39.4	90.3	33.63	45.3	73.1
1946: May	42.83	44.3	96.7	52.41	40.7	128.7	44.82	39.4	114.3	\$40.04	44.2	90.5	51.03	41.3	123.6	51.85	49.2	104.9
June	45.32	45.7	99.4	52.23	39.5	132.2	44.93	39.3	114.7	40.39	44.5	90.8	52.07	40.9	127.5	52.46	49.3	105.3
July	45.51	45.4	100.4	52.97	40.4	131.1	44.82	39.7	113.5	41.15	45.2	91.0	51.96	41.5	125.8	54.60	48.4	109.7
August	47.11	46.5	101.6	53.42	40.9	130.7	44.19	39.3	112.9	41.31	45.4	91.0	52.27	41.6	126.0	55.35	48.6	109.9
September	47.97	46.1	104.2	53.19	39.9	133.4	44.10	38.5	114.8	40.98	44.8	91.4	52.78	41.0	129.1	54.50	47.5	111.0
October	48.28	46.1	104.7	53.72	41.2	130.8	44.30	39.1	113.7	47.37	44.4	106.7	53.18	41.9	128.4	55.62	47.7	113.0
November	47.40	45.4	104.5	54.25	40.4	133.4	44.40	39.3	113.1	46.25	43.5	106.3	53.61	41.6	130.2	54.64	47.3	112.5
December	48.07	45.8	105.2	53.15	39.5	134.6	42.98	38.0	113.2	45.94	43.2	106.2	54.58	41.4	133.7	55.26	47.9	114.2
1947: January	45.55	43.1	105.8	56.02	41.3	135.5	43.37	38.4	113.2	46.83	43.8	106.9	54.11	41.9	131.3	55.98	47.7	116.5
February	45.34	42.8	106.2	55.86	40.3	139.0	43.31	38.0	114.1	51.23	44.0	116.4	55.37	41.6	135.2	56.70	48.0	117.4
March	46.41	43.5	106.9	56.25	39.6	142.1	42.51	37.9	112.4	50.91	43.7	116.4	54.43	41.0	134.1	56.82	47.8	118.4
April	48.67	44.5	108.0	58.74	40.8	144.4	32.26	28.1	114.7	59.27	47.3	125.2	55.90	42.2	134.3	56.94	47.8	119.0
May	49.86	45.6	108.2	58.71	40.5	144.8	37.08	31.2	118.8	57.17	46.0	124.2	55.90	41.6	135.8	56.99	47.6	119.5
Trade																		
	Wholesale			Retail														
				Total: Retail			Food			General merchandise			Apparel			Furniture and house-furnishings		
1939: Average	\$29.85	41.7	Cents 71.5	\$21.17	43.0	53.6	\$23.37	43.9	52.5	\$17.80	38.8	45.4	\$21.23	38.8	54.3	\$28.62	44.5	Cents 66.0
1941: January	30.59	40.6	75.6	21.53	42.9	54.9	23.78	43.6	53.7	18.22	38.8	46.6	21.89	39.0	56.0	27.96	43.9	66.6
1946: May	47.48	41.7	113.5	31.45	40.3	85.9	37.93	40.9	88.6	25.97	36.0	71.8	32.99	36.8	90.3	43.59	43.6	102.6
June	47.88	41.4	114.6	32.93	40.9	87.6	39.41	41.8	90.3	27.80	36.9	73.4	34.10	37.3	92.1	44.33	43.6	103.6
July	48.06	41.4	115.5	33.64	41.3	88.8	40.20	42.3	92.1	28.22	37.5	74.2	34.27	37.4	92.6	44.86	43.8	105.8
August	48.14	41.7	114.8	33.81	41.3	89.3	40.38	42.7	92.4	28.63	37.6	74.7	34.93	37.5	92.5	44.52	43.5	104.5
September	49.54	41.8	117.9	33.76	40.8	90.8	40.08	41.0	94.0	28.57	36.7	75.6	35.26	37.2	95.4	46.59	43.9	108.0
October	49.44	41.9	117.2	33.19	40.1	90.7	40.16	41.0	94.3	27.65	35.7	75.7	34.98	36.5	96.0	45.84	43.3	107.4
November	49.80	41.6	118.6	33.04	39.7	91.7	40.42	40.3	97.2	27.63	35.5	76.0	34.74	36.4	96.2	47.26	43.6	110.1
December	51.20	42.3	120.2	33.73	40.3	91.9	41.19	40.8	98.1	29.33	36.4	76.5	35.52	36.9	96.8	49.39	43.8	115.2
1947: January	50.05	41.5	119.7	35.02	39.9	95.3	41.50	40.1	101.2	29.75	35.9	81.1	35.89	36.9	95.7	45.86	42.2	112.5
February	50.87	40.8	123.0	35.27	40.1	95.7	42.04	40.4	101.9	29.98	36.1	80.9	35.85	37.3	95.6	45.85	41.9	111.6
March	50.80	40.8	123.1	35.31	40.0	96.0	41.67	40.1	102.2	29.91	36.0	80.9	35.99	36.8	97.5	46.96	42.1	115.2
April	51.13	41.2	122.9	35.93	39.9	97.3	41.96	40.0	103.0	30.60	36.1	82.2	36.67	36.8	99.7	47.82	42.5	116.1
May	51.57	41.2	124.1	36.43	39.9	98.6	42.55	40.0	105.1	31.30	36.0	84.0	36.98	36.8	99.7	49.01	42.5	118.0

See footnotes at end of table.

TABLE C-1: Average Earnings and Hours in Manufacturing and Nonmanufacturing Industries¹—Continued

Year and month	Trade—Continued						Hotels ⁴ (year-round)			Power laundries			Cleaning and dyeing			Security brokerage ⁵	Insurance ⁶		
	Retail—Continued																		
	Automotive			Lumber and build- ing materials															
	Avg. wkly. earn- ings	Avg. wkly. hours	Avg. hrly. earn- ings	Avg. wkly. earn- ings	Avg. wkly. hours	Avg. hrly. earn- ings	Avg. wkly. earn- ings	Avg. wkly. hours	Avg. hrly. earn- ings	Avg. wkly. earn- ings	Avg. wkly. hours	Avg. hrly. earn- ings	Avg. wkly. earn- ings	Avg. wkly. hours	Avg. hrly. earn- ings	Avg. wkly. earnings	Avg. wkly. earnings		
			<i>Cents</i>			<i>Cents</i>			<i>Cents</i>			<i>Cents</i>			<i>Cents</i>				
1939: Average.....	\$27.07	47.6	57.1	\$26.22	42.7	61.9	\$15.25	46.6	32.4	\$17.69	42.7	41.7	\$19.96	41.8	49.0	\$36.63	\$36.32		
1941: January.....	28.26	46.8	60.6	26.16	41.7	63.4	15.65	45.9	33.8	18.37	42.9	42.9	19.92	41.9	48.8	38.25	37.52		
1946: May.....	46.61	46.1	103.0	41.83	43.2	98.3	26.65	44.1	59.6	30.26	43.1	70.3	35.50	42.9	83.1	68.77	51.27		
June.....	47.47	46.3	104.0	42.08	43.2	98.8	26.70	43.9	59.8	30.64	43.3	70.3	36.29	43.8	83.4	67.39	51.51		
July.....	47.36	46.1	104.6	42.32	42.7	100.1	26.63	44.0	60.2	30.37	43.4	69.8	35.58	43.2	82.6	64.04	50.76		
August.....	47.97	46.3	105.9	42.93	43.0	101.2	27.15	43.8	61.4	29.97	43.0	69.3	35.01	42.6	83.2	62.61	49.87		
September.....	49.15	46.5	107.7	43.60	43.1	102.4	26.98	43.5	62.0	30.45	42.9	70.8	35.81	42.9	83.9	63.50	50.63		
October.....	48.82	46.1	107.9	43.70	43.1	103.3	27.27	43.8	62.6	30.52	43.0	70.8	35.81	42.2	85.4	62.24	51.20		
November.....	48.74	46.1	108.7	43.32	42.3	104.0	28.15	43.8	64.2	31.05	42.6	72.9	35.32	41.9	85.4	62.00	51.24		
December.....	50.61	47.2	109.3	44.78	43.5	103.7	28.40	43.7	65.1	32.13	43.5	73.9	36.50	42.8	86.7	63.78	52.25		
1947: January.....	49.01	45.7	109.2	44.30	43.0	104.3	28.62	43.8	64.8	32.46	43.3	74.5	36.29	42.3	87.4	62.56	52.46		
February.....	49.69	45.7	109.8	44.73	43.0	106.1	28.91	44.3	65.4	31.78	42.5	74.8	34.93	41.1	86.1	63.87	53.04		
March.....	49.58	45.4	110.8	45.74	43.3	106.8	29.09	44.7	64.2	32.18	42.4	75.9	36.41	42.0	87.6	62.91	52.18		
April.....	50.45	45.5	111.6	45.70	43.3	107.4	29.41	44.9	64.2	32.37	42.8	75.7	36.77	41.9	88.8	61.36	52.65		
May.....	50.54	45.6	112.4	46.32	43.4	109.4	29.23	45.0	64.3	32.45	42.7	75.6	37.70	42.6	89.4	61.06	52.35		

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of the pay period ending nearest the 15th of May 1947. The figures shown below relate to firms reporting man-hour data in all cases except security brokerage and insurance; weekly earnings are based on a slightly larger sample (see footnote 1, tables A-5 and A-8).

Manufacturing: 32,100 establishments; 7,146,000 production workers.

Mining: 2,600 establishments; 365,000 production workers.

Public utilities: 7,000 establishments; 454,000 employees.

Wholesale trade: 9,100 establishments; 246,000 employees.

Retail trade: 28,800 establishments; 746,000 employees.

Hotels (year-round): 1,000 establishments; 87,000 employees.

Power laundries and cleaning and dyeing: 1,300 establishments; 63,000 production workers.

Security brokerage and insurance: 3,000 establishments; 175,000 employees.

For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production workers only. For the remaining industries the data relate to all employees except high paid executives and officials. Data for the two current months are subject to revision without notation. Revised data for earlier months are identified by an asterisk.

² New series beginning with month and year shown below; not comparable with previously published data:

Metal doors, sash, frames, molding, and trim—January 1947; comparable December 1946 data are \$52.33, 43.2 hours, and 121.2 cents.

Steel barrels, kegs, and drums—January 1947; comparable December 1946 data are \$49.69 and 116.9 cents.

Firearms—May 1946; comparable April data are 41.1 hours and 121.1 cents.

Machine-tool accessories—June 1946; comparable May data are \$55.66 and 133.3 cents.

Typewriters—May 1946; comparable April data are 43.1 hours and 105.4 cents.

Washing machines, wringers and driers, domestic—January 1947; comparable December 1946 data are \$49.81 and 119.4 cents.

Aluminum manufactures—January 1947; comparable December 1946 data are \$48.34.

Corsets and allied garments—August 1946; comparable July data are \$32.21 and 85.2 cents.

Textile bags—July 1946; comparable June data are 82.0 cents.

Butter—January 1947; comparable December 1946 data are 47.5 hours and 88.8 cents.

Confectionery—January 1947; comparable December 1946 data are 91.8 cents.

Envelopes—February 1947; comparable January data are \$44.12.

³ These figures relate to nonsupervisory employees. Also excluded are messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.

⁴ Money payments only; additional value of board, room, uniforms, and tips, not included.

⁵ Data on average weekly hours and average hourly earnings are not available.

⁶ Revised.

TABLE C-2: Estimated Adjusted Hourly Earnings, Exclusive of Overtime,¹ of Production Workers in Manufacturing Industries

Year and month	All manufacturing			Durable goods			Nondurable goods		
	Based on distribution of total man-hours			Based on distribution of total man-hours			Based on distribution of total man-hours		
	As currently reported	As reported in January 1941		As currently reported	As reported in January 1941		As currently reported	As reported in January 1941	
		Absolute value	Index January 1941=100		Absolute value	Index January 1941=100		Absolute value	Index January 1941=100
	Cents	Cents		Cents	Cents		Cents	Cents	
1941: January.....	66.4	66.4	100.0	72.2	72.2	100.0	60.1	60.1	100.0
1942: January.....	76.2	75.1	113.1	83.5	82.6	114.4	67.0	66.8	111.1
October.....	83.9	80.7	121.5	91.9	88.8	123.0	72.3	71.8	119.5
1943: January.....	85.9	81.9	123.3	94.1	90.5	125.3	73.3	72.6	120.8
October.....	91.6	86.3	130.0	99.7	95.0	131.6	78.1	76.8	127.8
1944: January.....	93.1	87.7	132.1	101.3	96.5	133.7	79.3	78.0	129.8
October.....	95.6	90.8	136.7	103.8	99.1	137.3	82.9	81.7	135.9
1945: January.....	97.0	92.0	138.6	105.3	100.5	139.2	84.0	82.7	137.6
October.....	94.5	94.2	141.9	102.1	101.4	140.4	87.0	86.3	143.6
1946: January.....	96.6	97.0	146.1	103.3	103.7	143.6	90.3	89.5	148.9
February.....	96.7	98.2	147.9	103.2	104.7	145.0	91.7	91.1	151.6
March.....	99.9	100.8	151.8	106.7	107.8	149.3	93.9	93.2	155.1
April.....	102.3	102.7	154.7	109.6	110.2	152.6	95.4	94.6	157.4
May.....	104.2	104.7	157.7	112.0	112.7	156.1	96.6	95.9	159.6
June.....	105.3	105.7	159.2	113.4	114.2	158.2	97.2	96.4	160.4
July.....	106.4	106.7	160.7	115.0	115.5	160.0	97.7	97.0	161.4
August.....	107.6	107.9	162.5	115.0	115.6	160.1	100.1	99.5	165.6
September.....	109.2	109.4	164.8	116.6	117.2	162.3	101.5	100.8	167.7
October.....	109.3	109.5	164.9	116.3	116.9	161.9	102.1	101.4	168.7
November.....	110.3	110.5	166.4	117.5	118.1	163.6	103.0	102.2	170.0
December.....	110.7	110.6	166.6	117.6	117.8	163.2	103.6	102.7	170.9
1947: January.....	112.2	112.0	168.7	118.6	118.8	164.5	105.5	104.6	174.0
February.....	113.3	113.1	170.3	119.2	119.4	165.4	107.0	106.2	176.7
March.....	114.2	113.9	171.5	119.6	119.8	165.9	108.3	107.5	178.9
April.....	115.0	114.6	172.6	120.5	120.7	167.2	109.0	108.0	179.7
May.....	117.0	116.7	175.8	123.7	124.2	172.0	109.7	108.6	180.7

¹ Overtime is defined as work in excess of 40 hours per week and paid for at time and a half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on holidays. Data for the months of January, July, September, and November,

therefore, may not be precisely comparable with data for the other months in which important holidays are seldom included in the reporting pay period. This characteristic of the data does not appear to invalidate the comparability of the figure for January 1941 with those for the following months.

TABLE C-3: Average Earnings and Hours on Private Construction Projects, by Type of Firm ¹

Year and month	All types, private construction projects			Building construction														
				Total building					General contractors									
														Special building trades				
	Average weekly earnings ²	Average weekly hours	Average hourly earnings	Average weekly earnings ²	Average weekly hours	Average hourly earnings	Average weekly earnings ²	Average weekly hours	Average hourly earnings	Average weekly earnings ²	Average weekly hours	Average hourly earnings	Average weekly earnings ²	Average weekly hours	Average hourly earnings	Average weekly earnings ²	Average weekly hours	Average hourly earnings
1940: Average.....	(*)	(*)	(*)	\$31.70	33.1	\$0.958	\$30.56	33.3	\$0.918	\$33.11	32.7	\$1.012	\$32.87	34.6	\$0.949	\$33.05	32.5	\$1.016
1941: January.....	(*)	(*)	(*)	32.18	32.6	.986	30.10	32.7	.946	33.42	32.6	1.025	34.16	35.8	.955	31.49	29.7	1.062
1946: May.....	\$53.34	37.8	\$1.411	53.63	37.5	1.431	50.43	36.7	1.374	57.31	38.4	1.493	58.92	39.6	1.489	57.09	37.9	1.506
June.....	54.92	38.6	1.423	55.23	38.2	1.444	52.39	37.9	1.384	58.64	38.7	1.515	59.07	39.2	1.508	58.86	38.1	1.545
July.....	56.16	38.6	1.454	56.25	38.2	1.473	53.01	37.7	1.408	60.09	38.8	1.547	60.92	39.4	1.548	58.81	37.6	1.565
August.....	56.61	38.7	1.462	56.67	38.2	1.482	53.66	37.8	1.419	60.34	38.7	1.558	61.43	39.5	1.555	59.75	37.8	1.581
September.....	58.39	39.3	1.485	58.49	38.7	1.510	55.64	38.4	1.450	61.87	39.2	1.580	63.70	40.2	1.584	62.06	38.6	1.609
October.....	58.93	39.2	1.505	59.20	38.8	1.526	56.39	38.5	1.463	62.39	39.1	1.596	63.89	40.1	1.593	62.16	38.4	1.620
November.....	57.38	37.6	1.527	57.65	37.2	1.549	54.68	36.8	1.485	61.11	37.7	1.622	62.62	38.6	1.620	57.39	35.2	1.629
December.....	59.92	38.8	1.545	60.32	38.4	1.569	56.73	38.0	1.495	64.53	40.0	1.655	67.44	40.8	1.655	61.05	36.9	1.653
1947: January.....	59.38	37.9	1.568	59.97	37.6	1.594	56.49	37.2	1.518	64.00	38.1	1.680	67.16	39.9	1.681	58.83	35.9	1.637
February.....	58.67	37.4	1.569	58.92	36.9	1.598	54.91	36.2	1.516	63.65	37.6	1.691	66.65	39.3	1.694	58.75	36.3	1.619
March.....	60.63	38.3	1.585	61.23	38.0	1.610	58.02	37.9	1.531	64.92	38.2	1.699	66.89	39.2	1.705	60.10	37.1	1.619
April.....	60.11	37.4	1.607	60.53	37.1	1.634	56.32	36.2	1.554	65.43	38.0	1.723	67.37	38.7	1.739	60.87	36.6	1.662
May.....	61.93	38.1	1.627	62.38	37.7	1.656	58.21	36.9	1.578	67.08	38.5	1.741	68.24	38.7	1.761	63.71	37.2	1.711

See footnotes at end of table.

TABLE C-3: Average Earnings and Hours on Private Construction Projects, by Type of Firm¹—Continued

Year and month	Building construction—Continued																		
	Special building trades—Continued																		
	Electrical work			Masonry			Plastering and lathing			Carpentry			Roofing and sheet metal			Excavation and foundation			
	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	
1940: Average.....	\$41.18	34.5	\$1.196	\$29.47	29.8	\$0.988	\$36.60	28.5	\$1.286	\$31.23	33.0	\$0.947	\$28.07	31.8	\$0.883	\$26.53	30.9	\$0.859	
1941: January.....	43.18	36.5	1.184	25.66	25.3	1.012	35.36	27.5	1.287	30.40	31.2	.974	27.60	30.3	.910	23.86	29.1	.820	
1946: May.....	66.50	40.3	1.651	53.08	37.0	1.434	58.65	35.9	1.632	54.78	38.9	1.407	48.61	36.7	1.325	50.50	37.6	1.342	
June.....	67.51	41.1	1.643	54.72	37.7	1.453	61.89	37.8	1.639	55.93	39.2	1.425	50.53	37.4	1.350	52.46	38.6	1.361	
July.....	67.94	40.9	1.661	57.38	38.7	1.484	61.75	37.2	1.659	57.07	39.1	1.458	53.11	38.1	1.393	55.28	38.8	1.423	
August.....	67.58	40.3	1.678	58.36	38.6	1.510	64.60	37.7	1.716	56.82	39.4	1.442	53.30	37.7	1.414	54.21	38.3	1.416	
September.....	69.66	41.1	1.696	58.53	38.1	1.537	65.21	38.3	1.703	58.68	39.8	1.473	54.06	38.3	1.412	54.88	38.4	1.431	
October.....	70.59	40.8	1.732	58.70	38.0	1.544	66.43	38.5	1.727	59.95	39.1	1.531	54.33	37.5	1.448	51.85	37.9	1.369	
November.....	69.63	39.8	1.750	57.56	37.4	1.541	63.13	35.3	1.788	57.64	38.3	1.504	50.95	36.1	1.413	52.10	36.4	1.431	
December.....	74.76	41.4	1.808	58.36	37.5	1.556	71.04	38.7	1.837	57.85	38.2	1.513	52.84	36.4	1.450	54.94	37.9	1.450	
1947: January.....	73.85	40.2	1.838	56.49	34.9	1.618	69.81	37.9	1.842	58.20	37.7	1.544	51.49	34.9	1.477	53.98	36.3	1.487	
February.....	74.95	40.8	1.836	52.41	32.4	1.619	66.84	36.3	1.480	57.69	37.8	1.528	50.59	34.1	1.483	55.00	37.2	1.477	
March.....	75.75	40.5	1.872	57.37	35.1	1.637	69.15	37.9	1.822	62.98	39.6	1.591	53.67	35.8	1.497	58.36	37.7	1.550	
April.....	76.31	40.5	1.885	57.36	34.6	1.656	72.40	38.2	1.894	61.01	37.9	1.611	54.02	36.0	1.499	56.07	36.5	1.537	
May.....	76.33	40.4	1.890	62.01	37.2	1.668	74.95	38.9	1.926	62.67	38.9	1.612	57.43	38.2	1.542	59.70	38.5	1.552	

Year and month	Nonbuilding construction											
	Total nonbuilding			Highway and street			Heavy construction			Other		
	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings	Average weekly earnings ¹	Average weekly hours	Average hourly earnings
1940: Average.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1941: January.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1946: May.....	\$51.74	39.5	\$1.308	\$49.58	39.3	\$1.261	\$53.53	39.5	\$1.357	\$50.50	40.0	\$1.264
June.....	53.25	40.5	1.313	53.37	41.0	1.303	53.05	39.6	1.338	53.52	42.0	1.275
July.....	55.68	41.0	1.357	53.93	41.0	1.315	56.81	40.7	1.396	55.12	41.9	1.315
August.....	56.24	41.6	1.353	54.39	40.9	1.331	58.21	42.1	1.382	53.40	40.9	1.305
September.....	57.90	42.2	1.372	55.71	42.0	1.327	59.86	42.6	1.407	54.46	41.3	1.317
October.....	57.59	41.0	1.403	54.41	40.9	1.330	59.56	41.0	1.453	55.02	41.3	1.331
November.....	56.13	39.2	1.433	53.24	39.0	1.366	57.41	39.0	1.470	54.96	39.8	1.381
December.....	58.02	40.5	1.434	55.19	39.9	1.383	59.11	40.3	1.466	57.44	41.4	1.387
1947: January.....	56.67	39.0	1.451	52.23	37.3	1.401	57.94	39.1	1.482	56.61	40.5	1.398
February.....	57.49	39.9	1.441	53.83	39.1	1.378	59.15	40.2	1.472	55.44	39.7	1.395
March.....	57.82	39.3	1.473	53.72	38.0	1.412	58.98	39.2	1.504	57.83	40.5	1.429
April.....	58.30	38.9	1.499	52.82	37.4	1.411	60.48	39.2	1.542	57.13	39.4	1.451
May.....	60.01	39.8	1.508	54.26	38.7	1.404	62.50	40.1	1.559	58.60	40.2	1.459

¹ Covers all contract construction firms reporting to the Bureau during the months shown (over 11,000), but not necessarily identical establishments. The data include all employees of these construction firms working at the site of privately financed projects (skilled, semi-skilled, unskilled, superintendents, time clerks, etc.). Employees of these firms engaged on publicly-financed projects and off-site work are excluded.

² Includes types not shown separately.

³ Hourly earnings, when multiplied by weekly hours of work, may not exactly equal weekly earnings because of rounding.

⁴ Not available prior to February 1946.

⁵ Includes general contracting as well as general building maintenance, and other special building data.

D: Prices and Cost of Living

TABLE D-1: Consumers' Price Index¹ for Moderate-Income Families in Large Cities, by Group of Commodities

[1935-39=100]

Year and month	All items	Food	Apparel	Rent	Fuel, electricity, and ice			House-furnishings	Miscellaneous
					Total	Gas and electricity	Other fuels and ice		
1913: Average.....	70.7	79.9	69.3	92.2	61.9	(2)	(2)	59.1	50.9
1914: July.....	71.7	81.7	69.8	92.2	62.3	(2)	(2)	60.8	52.0
1918: December.....	118.0	149.6	147.9	97.1	90.4	(2)	(2)	121.2	83.1
1920: June.....	149.4	185.0	209.7	119.1	104.8	(2)	(2)	169.7	100.7
1929: Average.....	122.5	132.5	115.3	141.4	112.5	(2)	(2)	111.7	104.6
1932: Average.....	97.6	86.5	90.8	116.9	103.4	(2)	(2)	85.4	101.7
1939: Average.....	99.4	95.2	100.5	104.3	99.0	98.9	99.3	101.3	100.7
August 15.....	98.6	93.5	100.3	104.3	97.5	99.0	96.3	100.6	100.4
1940: Average.....	100.2	96.6	101.7	104.6	99.7	98.0	101.6	100.5	101.1
1941: Average.....	105.2	105.5	106.3	106.2	102.2	97.1	107.4	107.3	104.0
January 1.....	100.8	97.6	101.2	105.0	100.8	97.5	104.0	100.2	101.8
December 15.....	110.5	113.1	114.8	108.2	104.1	96.7	111.3	116.8	107.7
1942: Average.....	116.5	123.9	124.2	108.5	105.4	96.7	113.9	122.2	110.9
1943: Average.....	123.6	138.0	129.7	108.0	107.7	96.1	119.0	125.6	115.8
1944: Average.....	125.5	136.1	138.8	108.2	109.8	95.8	123.4	136.4	121.3
1945: Average.....	128.4	139.1	145.9	108.3	110.3	95.0	125.1	145.8	124.1
August 15.....	129.3	140.9	146.4	(2)	111.4	95.2	127.2	146.0	124.5
1946: Average.....	139.3	159.6	160.2	108.6	112.4	92.4	132.0	159.2	128.8
June 15.....	133.3	145.6	157.2	108.5	110.5	92.1	128.4	156.1	127.9
July 15.....	141.2	165.7	158.7	(2)	113.3	92.1	133.8	157.9	128.2
August 15.....	144.1	171.2	161.2	108.7	113.7	91.8	135.0	160.0	129.8
September 15.....	145.9	174.1	165.9	108.8	114.4	91.7	136.5	165.6	129.9
October 15.....	148.6	180.0	168.1	(2)	114.4	91.6	136.6	168.5	131.0
November 15.....	152.2	187.7	171.0	(2)	114.8	91.8	137.2	171.0	132.5
December 15.....	153.3	185.9	176.5	(2)	115.5	92.0	138.3	177.1	136.1
1947: January 15.....	153.3	183.8	179.0	108.8	117.3	91.9	142.1	179.1	137.1
February 15.....	153.2	182.3	181.5	108.9	117.5	92.2	142.3	180.8	137.4
March 15.....	156.3	189.5	184.3	109.0	117.6	92.2	142.5	182.3	138.2
April 15.....	156.2	188.0	184.9	109.0	118.4	92.5	143.8	182.5	139.2
May 15.....	156.0	187.6	185.0	109.2	117.7	92.4	142.4	181.9	139.0
June 15.....	157.1	190.5	185.7	109.2	117.7	91.7	143.0	182.6	139.1

¹ The "consumers' price index for moderate-income families in large cities," formerly known as the "cost-of-living index," measures average changes in retail prices of selected goods, rents, and services, weighted by quantities bought by families of wage earners and moderate-income workers in large cities in 1934-36. The items priced for the index constituted about 70 percent of the expenditures of city families whose incomes averaged \$1,524 in 1934-36.

The President's Committee on the Cost of Living estimated that, because of quality deterioration, disappearance of cheaper goods, and other factors, the consumers' price index understated the rise in retail prices of living essentials by 3 to 4 points between January 1941 and September 1944 for large cities and an additional 1/4 point for small cities. Later the Stabilization Director, in December 1945, made an allowance of 4 1/2 points for large cities and 5 points for large and small cities combined.

These adjustments have not been included by the Bureau in the published indexes. For a more detailed statement concerning these adjustments, see the *Monthly Labor Review* for March 1947.

Bureau of Labor Statistics Bulletin 696, *Changes in Cost of Living in Large Cities in the United States, 1913-41*, contains a detailed description of methods used in constructing this index. Additional information on the consumers' price index is given in a compilation of reports published by the Office of Economic Stabilization, Report of the President's Committee on the Cost of Living.

Mimeographed tables are available upon request showing indexes for each of the cities regularly surveyed by the Bureau and for each of the major groups of living essentials. Indexes for all large cities combined are available since 1913. The beginning date for series of indexes for individual cities varies from city to city but indexes are available for most of the 34 cities since World War I.

² Data not available.

³ Rents not surveyed this month.

TABLE D-2: Consumers' Price Index for Moderate-Income Families by City,¹ for Selected Periods

[1935-39=100]

City	June 15, 1947	May 15, 1947	Apr. 15, 1947	Mar. 15, 1947	Feb. 15, 1947	Jan. 15, 1947	Dec. 15, 1946	Nov. 15, 1946	Oct. 15, 1946	Sept. 15, 1946	Aug. 15, 1946	July 15, 1946	June 15, 1946	Jan. 1, 1941 ²	Aug. 15, 1939
Average.....	157.1	156.0	156.2	156.3	153.2	153.3	153.3	152.2	148.6	145.9	144.1	141.2	133.3	100.8	98.6
Atlanta, Ga.....	159.1	(³)	(³)	160.9	(³)	(³)	155.8	(³)	(³)	146.5	(³)	(³)	133.8	99.8	98.0
Baltimore, Md.....	160.5	159.4	159.7	159.6	155.9	156.2	155.7	154.9	150.9	148.1	146.7	143.2	135.6	100.7	98.7
Birmingham, Ala.....	162.1	160.7	161.7	162.0	158.1	158.7	158.5	157.9	150.4	147.1	148.6	143.3	136.5	101.6	98.5
Boston, Mass.....	150.3	148.6	149.4	150.3	147.4	148.7	148.2	146.1	144.6	141.6	140.0	137.6	127.9	99.1	97.1
Buffalo, N. Y.....	157.7	156.2	155.3	155.3	152.4	152.7	151.7	149.6	146.5	144.9	142.2	139.6	132.6	101.9	98.5
Chicago, Ill.....	158.3	156.8	155.7	156.2	152.8	153.0	153.0	152.5	149.5	146.1	144.0	141.1	130.9	101.2	98.7
Cincinnati, Ohio.....	158.5	156.8	157.2	157.0	153.2	152.6	152.7	152.9	146.5	145.4	143.5	140.2	132.2	99.6	97.3
Cleveland, Ohio.....	160.3	159.0	159.2	159.2	155.9	156.1	156.2	154.0	149.5	147.6	147.0	143.8	135.7	102.0	100.0
Denver, Colo.....	155.9	155.8	155.8	154.8	152.2	151.4	152.5	151.9	143.7	142.5	140.1	138.1	131.7	100.0	98.6
Detroit, Mich.....	158.7	156.8	156.7	156.5	153.1	153.0	153.1	152.0	148.8	146.6	145.4	144.2	136.4	101.0	98.5
Houston, Tex.....	157.6	157.6	158.6	157.1	154.1	153.9	152.3	150.0	144.2	142.8	140.7	136.6	130.5	102.0	100.7
Indianapolis, Ind.....	158.0	(³)	(³)	157.5	(³)	(³)	154.2	(³)	(³)	146.1	(³)	(³)	131.9	102.0	98.0
Jacksonville, Fla.....	163.5	(³)	(³)	163.4	(³)	(³)	158.8	(³)	(³)	150.2	(³)	(³)	138.4	101.9	98.5
Kansas City, Mo.....	149.5	150.5	151.0	150.8	148.7	147.7	147.0	146.8	142.1	141.1	140.4	136.4	129.4	98.4	98.6
Los Angeles, Calif.....	156.3	157.6	157.4	156.9	155.9	155.3	154.5	154.5	148.5	145.5	144.6	142.3	136.1	102.5	100.5
Manchester, N. H.....	160.4	(³)	(³)	158.1	(³)	(³)	156.5	(³)	(³)	147.0	(³)	(³)	134.7	100.2	97.8
Memphis, Tenn.....	160.6	(³)	(³)	158.8	(³)	(³)	156.3	(³)	(³)	146.2	(³)	(³)	134.5	99.8	97.8
Milwaukee, Wis.....	156.6	(³)	(³)	154.5	(³)	(³)	150.6	(³)	(³)	142.8	(³)	(³)	131.2	99.2	97.0
Minneapolis, Minn.....	152.9	151.5	151.4	151.6	149.0	148.3	149.7	148.8	145.9	142.4	139.5	138.0	129.4	101.8	99.7
Mobile, Ala.....	159.3	(³)	(³)	159.2	(³)	(³)	153.6	(³)	(³)	145.2	(³)	(³)	132.9	100.4	98.6
New Orleans, La.....	164.6	(³)	(³)	164.5	(³)	(³)	162.9	(³)	(³)	153.8	(³)	(³)	138.0	101.7	99.7
New York, N. Y.....	156.9	155.6	156.8	157.4	154.2	154.6	155.2	154.3	152.8	149.4	145.7	143.9	135.8	101.0	99.0
Norfolk, Va.....	169.0	(³)	(³)	160.9	(³)	(³)	157.6	(³)	(³)	148.8	(³)	(³)	135.2	100.6	97.8
Philadelphia, Pa.....	157.1	155.1	154.9	156.1	151.6	152.3	152.5	150.5	147.8	146.0	143.7	140.0	132.5	99.2	97.8
Pittsburgh, Pa.....	161.1	159.6	159.0	159.2	156.5	156.0	155.4	153.8	149.4	147.4	145.9	142.8	134.7	101.2	98.4
Portland, Maine.....	153.3	(³)	(³)	152.5	(³)	(³)	149.2	(³)	(³)	141.4	(³)	(³)	128.7	98.5	97.1
Portland, Oreg.....	161.5	(³)	(³)	163.6	(³)	(³)	157.8	(³)	(³)	150.9	(³)	(³)	140.3	102.0	100.1
Richmond, Va.....	152.6	(³)	(³)	152.9	(³)	(³)	149.3	(³)	(³)	139.8	(³)	(³)	128.2	99.6	98.0
St. Louis, Mo.....	155.6	154.6	155.1	155.8	151.8	151.1	151.2	150.6	146.6	142.9	142.5	139.6	131.2	101.0	98.1
San Francisco, Calif.....	159.3	160.5	161.3	160.3	158.4	159.3	160.4	159.1	153.3	150.9	147.9	144.4	137.8	101.8	99.3
Savannah, Ga.....	165.8	165.5	166.2	166.6	162.5	162.3	162.2	161.8	155.2	153.8	152.7	148.8	140.6	101.4	99.3
Scranton, Pa.....	159.9	(³)	(³)	157.3	(³)	(³)	154.0	(³)	(³)	146.4	(³)	(³)	132.2	99.2	96.0
Seattle, Wash.....	158.3	158.5	159.1	158.2	155.4	155.7	157.2	155.3	151.9	147.9	144.8	142.9	137.0	102.1	100.3
Washington, D. C.....	156.0	154.6	154.8	154.7	151.5	152.1	152.0	150.3	147.6	145.0	142.6	140.5	133.8	99.9	98.6

¹ The indexes are based on time-to-time changes in the cost of goods and services purchased by moderate-income families in large cities. They do not indicate whether it costs more to live in one city than in another.

² Jan. 1, 1941, is the base date for determining allowable "cost of living" wage increases under the "Little Steel" formula and under the wage-price policy of February 1946. January 1, 1941, indexes have been estimated by

assuming an even rate of change from Dec. 15, 1940, to the next pricing period.

³ Consumer's price indexes are computed for 34 large cities in March, June, September, and December. In the intervening months, indexes are computed for 21 of the 34 cities.

TABLE D-3: Consumers' Price Index for Moderate-Income Families, by City and Group of Commodities

[1935-39=100]

City	Food		Clothing		Rent		Fuel, electricity, and ice						House furnishings		Miscellaneous	
							Total		Gas and electricity		Other fuels and ice					
	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947	June 15, 1947	May 15, 1947
Average.....	190.5	187.6	185.7	185.0	109.2	109.2	117.7	117.7	91.7	92.4	143.0	142.4	182.6	181.9	139.1	139.0
Atlanta, Ga.....	193.0	190.3	180.4	(1)	(2)	108.2	128.5	128.5	78.3	78.3	174.7	174.6	185.4	(1)	145.5	(1)
Baltimore, Md.....	202.2	198.5	180.5	182.6	(2)	(1)	125.0	124.7	113.0	112.4	134.7	134.6	186.3	182.5	136.4	137.2
Birmingham, Ala.....	197.3	195.8	184.4	180.4	(2)	(1)	120.5	120.5	79.6	79.6	151.2	151.2	171.7	169.1	138.7	137.8
Boston, Mass.....	179.6	175.6	173.5	171.8	(2)	(1)	127.5	127.5	105.5	105.5	139.4	139.4	175.2	174.7	136.3	136.4
Buffalo, N. Y.....	187.0	182.5	186.5	187.6	(2)	115.4	118.1	117.8	94.9	94.9	138.7	138.2	190.1	188.9	144.0	144.0
Chicago, Ill.....	193.9	190.6	184.8	183.0	(2)	116.4	112.4	111.7	83.5	83.5	142.4	141.0	175.8	173.4	137.6	137.4
Cincinnati, Ohio.....	191.1	187.9	185.5	181.9	106.3	(2)	116.2	116.2	90.8	90.8	140.4	140.4	179.3	178.2	140.3	140.0
Cleveland, Ohio.....	198.3	194.3	183.5	183.4	(2)	(2)	122.3	122.3	104.9	104.9	139.0	139.0	170.2	169.0	138.0	138.5
Denver, Colo.....	191.9	191.9	183.7	182.3	(2)	110.6	99.5	99.5	68.5	68.5	135.1	135.1	200.9	202.4	136.7	136.9
Detroit, Mich.....	188.5	182.7	182.1	181.9	115.4	(2)	122.3	122.2	83.7	83.8	151.6	151.4	190.3	188.4	149.8	150.1
Houston, Tex.....	196.2	197.1	188.5	187.0	(2)	(2)	94.4	94.4	81.9	81.9	128.0	127.9	184.2	182.4	139.8	139.8
Indianapolis, Ind.....	188.7	185.1	176.4	(1)	(2)	(2)	123.1	123.2	86.6	86.6	144.5	144.7	176.6	(1)	142.6	(1)
Jacksonville, Fla.....	199.1	196.0	177.0	(1)	(2)	(2)	130.5	130.3	92.8	92.8	163.2	162.8	170.6	(1)	151.1	(1)
Kansas City, Mo.....	180.0	180.7	169.0	170.0	(2)	(2)	109.4	121.3	66.3	91.2	148.8	148.7	171.4	170.2	138.3	137.9
Los Angeles, Calif.....	193.8	196.7	177.1	179.5	(2)	(2)	94.5	94.5	89.3	89.3	119.3	119.3	176.1	179.1	138.3	138.2
Manchester, N. H.....	190.3	185.1	176.1	(1)	108.6	(2)	131.5	131.5	94.6	94.6	150.0	149.9	187.4	(1)	135.6	(1)
Memphis, Tenn.....	205.1	201.6	195.1	(1)	(2)	(2)	116.2	114.6	77.0	77.0	137.9	135.4	159.0	(1)	131.7	(1)
Milwaukee, Wis.....	190.8	186.6	184.3	(1)	109.2	(2)	122.6	121.0	98.3	93.3	139.3	140.0	189.0	(1)	135.7	(1)
Minneapolis, Minn.....	182.6	179.0	188.1	187.0	(2)	(2)	114.9	114.5	78.9	78.9	128.5	137.7	178.9	177.3	137.5	137.5
Mobile, Ala.....	196.9	197.0	182.1	(1)	(2)	(2)	118.2	117.9	84.1	84.1	145.1	144.7	170.3	(1)	131.5	(1)
New Orleans, La.....	203.7	201.1	188.9	(1)	(2)	(2)	107.3	105.8	75.1	75.1	141.7	138.7	174.1	(1)	139.1	(1)
New York, N. Y.....	187.9	184.8	201.2	200.5	(2)	(2)	116.9	115.6	94.0	94.0	152.0	148.7	173.2	175.0	140.1	139.9
Norfolk, Va.....	198.0	198.8	175.1	(1)	(2)	109.3	125.3	125.3	94.9	94.9	149.3	149.3	182.9	(1)	143.3	(1)
Philadelphia, Pa.....	187.1	183.4	182.3	180.2	(2)	(2)	122.7	122.4	97.8	97.8	141.7	141.2	180.2	180.2	138.9	137.4
Pittsburgh, Pa.....	196.9	192.4	209.1	210.7	(2)	(2)	120.8	120.7	103.3	103.3	150.7	150.7	179.4	181.1	136.5	136.3
Portland, Maine.....	185.3	180.2	178.6	(1)	(2)	(2)	127.5	127.4	96.1	95.7	143.1	143.1	178.9	(1)	136.2	(1)
Portland, Oreg.....	199.7	200.8	179.9	(1)	(2)	(2)	122.8	122.8	89.9	89.9	163.0	163.0	176.2	(1)	141.4	(1)
Richmond, Va.....	185.8	186.3	183.8	(1)	104.6	(2)	117.8	117.4	96.7	96.7	130.6	130.1	190.2	(1)	131.6	(1)
St. Louis, Mo.....	196.8	193.4	177.9	178.3	106.3	(2)	116.6	118.0	94.1	97.2	136.5	136.4	158.7	156.4	132.7	133.0
San Francisco, Calif.....	196.9	199.9	176.6	178.6	(2)	(2)	82.7	82.6	72.7	72.7	118.2	117.6	155.1	153.1	148.1	148.5
Savannah, Ga.....	209.4	208.2	172.6	174.0	(2)	(2)	128.2	128.2	91.2	91.2	150.1	150.0	189.2	190.4	142.7	142.6
Scranton, Pa.....	194.9	189.2	190.4	(1)	(2)	(2)	126.6	126.7	91.8	91.8	147.9	148.0	177.5	(1)	133.9	(1)
Seattle, Wash.....	193.3	193.9	178.2	178.0	(2)	(2)	112.4	112.1	86.8	85.8	133.8	134.1	184.8	183.6	143.1	143.4
Washington, D. C.....	190.9	187.8	205.1	202.8	(2)	(2)	118.9	118.1	94.4	94.4	135.2	133.9	189.8	188.3	143.7	143.2

¹ Prices of clothing, housefurnishings, and miscellaneous goods and services are obtained in 34 large cities in March, June, September, and December. In intervening months, prices are collected in 21 of the 34 cities for a shorter list of goods and services.

² Rents not surveyed this month.

TABLE D-4: Indexes of Retail Prices of Foods,¹ by Group, for Selected Periods

[1935-39=100]

Year and month	All foods	Cereals and bakery products	Meats					Dairy products	Eggs	Fruits and vegetables				Beverages	Fats and oils	Sugar and sweets
			Total	Beef and veal	Pork	Lamb	Chickens			Total	Fresh	Canned	Dried			
1923: Average	124.0	105.5	101.2					129.4	136.1	169.5	173.6	124.8	175.4	131.5	126.2	175.4
1926: Average	137.4	115.7	117.8					127.4	141.7	210.8	226.2	122.9	152.4	170.4	145.0	120.0
1929: Average	132.5	107.6	127.1					131.0	143.8	169.0	173.5	124.3	171.0	164.8	127.2	114.3
1932: Average	86.5	82.6	79.3					84.9	82.3	103.5	105.9	91.1	91.2	112.6	71.1	89.6
1939: Average	95.2	94.5	96.6	101.1	88.9	99.5	93.8	101.0	95.9	91.0	94.5	95.1	92.3	93.3	95.5	100.6
August	93.5	93.4	95.7	99.6	88.0	98.8	94.6	99.6	93.1	90.7	92.4	92.8	91.6	90.3	94.9	95.6
1940: Average	96.6	96.8	95.8	102.8	81.1	99.7	94.8	101.4	93.8	96.5	97.3	92.4	100.6	92.5	82.2	96.8
1941: Average	105.5	97.9	107.5	110.8	100.1	106.6	102.1	124.5	112.2	103.2	104.2	97.9	106.7	101.5	94.0	106.4
December	113.1	102.5	111.1	114.4	103.2	108.1	100.5	138.9	120.5	138.1	110.5	106.3	118.3	114.1	108.5	114.4
1942: Average	123.9	105.1	126.0	123.6	120.4	124.1	122.6	163.0	125.4	136.5	130.8	132.8	121.6	136.3	122.1	119.6
1943: Average	138.0	107.6	133.8	124.7	119.9	136.9	146.1	206.5	134.6	161.9	168.8	178.0	130.6	158.9	124.8	127.1
1944: Average	136.1	108.4	129.9	118.7	112.2	134.5	151.0	207.6	133.6	153.9	168.2	177.2	129.5	164.5	124.3	123.3
1945: Average	139.1	109.0	131.2	118.4	112.6	136.0	154.4	217.1	133.9	164.4	177.1	188.2	130.2	168.2	124.7	124.0
August	140.9	109.1	131.8	118.5	112.6	136.4	157.3	217.8	133.4	171.4	183.5	196.2	130.3	168.6	124.7	126.6
1946: Average	159.6	125.0	161.3	150.5	148.2	163.9	174.0	236.2	165.1	168.8	182.4	190.7	140.8	190.4	152.1	143.9
June	145.6	122.1	134.0	121.2	114.3	139.0	162.8	219.7	147.8	147.1	183.5	196.7	127.5	172.5	125.4	136.2
July	165.7	126.1	173.7	175.2	150.3	171.6	178.2	235.2	179.1	161.0	188.4	202.1	130.9	175.9	126.0	137.9
August	171.2	135.4	186.6	180.3	182.4	189.5	175.2	237.6	180.1	173.6	178.3	185.8	140.7	183.0	126.6	140.3
September	174.1	137.3	188.5	180.3	182.4	187.6	192.8	237.8	186.6	193.3	176.4	181.1	148.7	185.6	162.0	151.4
October	180.0	138.5	190.7	174.6	182.4	187.7	225.3	249.7	202.4	214.6	176.5	178.8	154.6	198.7	166.5	147.9
November	187.7	140.6	203.6	191.0	207.1	205.4	188.9	265.0	198.5	201.6	184.5	182.3	167.7	251.6	167.8	244.4
December	185.9	141.7	197.8	187.6	193.3	198.8	189.4	267.6	200.9	201.1	185.0	180.6	172.6	268.0	176.2	207.3
1947: January	183.8	143.4	199.0	190.9	190.8	205.3	185.8	271.3	190.1	181.7	187.9	184.1	173.6	269.2	178.3	201.9
February	182.3	144.1	196.7	190.0	191.6	204.3	176.5	258.7	183.2	169.9	191.7	189.3	172.6	269.9	182.8	201.3
March	189.5	148.1	207.6	195.1	217.2	209.7	178.3	266.0	187.5	174.7	199.6	199.4	172.9	271.3	186.9	219.1
April	188.0	153.4	202.6	194.6	203.5	206.5	177.1	261.0	178.9	176.3	200.4	200.7	172.6	269.7	189.5	227.8
May	187.6	154.2	203.9	197.1	204.2	209.6	179.6	255.1	171.5	178.9	207.0	209.5	172.3	268.1	188.9	200.5
June	190.5	154.6	216.9	216.4	213.6	226.7	182.3	254.7	171.5	183.0	205.0	208.0	169.7	262.6	181.3	188.3

¹ The Bureau of Labor Statistics retail food prices are obtained monthly during the first four days of the week containing the fifteenth of the month, through voluntary reports from chain and independent retail food dealers. Articles included are selected to represent food sales to moderate-income families.

The indexes, based on the retail prices of 61 foods, are computed by the fixed-base-weighted-aggregate method, using weights representing (1) relative importance of chain and independent store sales in computing city average prices; (2) food purchases by families of wage earners and moderate-income

workers, in computing city indexes; and (3) population weights, to combine city aggregates in order to derive average prices and indexes for all cities combined.

Indexes of retail food prices in 56 large cities combined, by commodity groups, for the years 1923 through 1943 (1935-39=100), may be found in Bulletin No. 799, "Retail Prices of Food—1942 and 1943," Bureau of Labor Statistics, U. S. Department of Labor, table 3, p. 15. Mimeographed tables of the same data, by months, January 1935 to date, are available upon request.

TABLE D-5: Indexes of Retail Prices of Foods by City

[1935-39=100]

City	June 1947	May 1947	April 1947	Mar. 1947	Feb. 1947	Jan. 1947	Dec. 1946	Nov. 1946	Oct. 1946	Sept. 1946	Aug. 1946	July 1946	June 1946	Aug. 1939
United States.....	190.5	187.6	188.0	189.5	182.3	183.8	185.9	187.7	180.0	174.1	171.2	165.7	145.6	93.5
Atlanta, Ga.....	193.0	190.3	194.6	199.6	187.5	187.5	188.7	192.0	177.5	173.4	174.1	161.5	141.0	92.5
Baltimore, Md.....	202.2	198.5	197.7	199.3	189.7	191.4	192.3	195.1	186.1	180.1	178.0	170.5	152.4	94.7
Birmingham, Ala.....	197.3	195.8	198.8	202.9	193.5	196.0	198.4	203.5	183.0	176.6	180.8	166.6	147.7	90.7
Boston, Mass.....	179.6	175.6	176.3	180.0	172.7	177.6	178.1	177.8	174.4	168.0	165.2	161.9	138.0	93.5
Bridgeport, Conn.....	186.9	180.8	180.4	184.6	178.5	180.0	180.7	179.5	175.9	168.9	164.3	158.7	139.1	93.2
Buffalo, N. Y.....	187.0	182.5	179.2	179.7	173.3	175.9	175.8	175.4	168.4	164.7	162.8	157.9	140.2	94.5
Butte, Mont.....	185.9	184.7	183.4	184.5	175.1	174.9	180.2	180.8	175.6	170.0	163.6	154.4	139.7	94.1
Cedar Rapids, Iowa ¹	203.2	197.3	197.3	195.6	190.0	188.6	192.7	192.1	184.8	180.0	174.6	171.8	148.2	95.1
Charleston, S. C.....	188.3	187.0	188.0	189.2	181.5	180.5	184.2	188.2	173.0	170.4	173.2	161.9	140.8	95.1
Chicago, Ill.....	193.9	190.6	188.6	190.8	183.2	184.5	187.0	189.4	183.4	176.2	174.0	168.4	142.8	92.3
Cincinnati, Ohio.....	191.1	187.9	188.9	191.3	182.8	182.4	184.0	187.0	171.3	169.3	168.6	161.6	141.4	90.4
Cleveland, Ohio.....	198.3	194.3	195.0	195.1	186.9	189.1	191.4	193.1	183.1	179.3	178.6	171.3	149.3	93.6
Columbus, Ohio.....	178.4	176.6	176.2	177.0	170.0	171.6	174.0	179.4	171.6	161.9	160.3	153.1	136.4	88.1
Dallas, Tex.....	191.4	192.5	193.8	191.4	186.5	186.3	187.1	188.7	177.0	173.0	168.6	162.7	142.4	91.7
Denver, Colo.....	191.9	191.9	192.4	191.4	185.7	185.0	190.6	192.7	171.4	170.1	166.3	161.8	145.3	92.7
Detroit, Mich.....	188.5	182.7	182.7	183.0	175.1	176.5	179.2	181.6	173.9	168.4	168.5	166.9	145.4	90.6
Fall River, Mass.....	186.3	181.7	183.1	186.8	178.2	180.9	177.2	182.6	175.6	168.4	164.7	158.2	138.1	95.4
Houston, Tex.....	196.2	197.1	199.2	196.3	190.6	192.5	189.9	190.0	174.7	173.5	168.8	160.4	144.0	97.8
Indianapolis, Ind.....	188.7	185.1	187.9	187.8	179.9	180.0	184.3	187.3	175.9	172.4	170.8	159.9	141.5	90.7
Jackson, Miss ¹	202.7	201.7	206.0	203.3	199.0	199.1	200.8	203.4	195.8	189.0	188.0	169.1	150.6	95.8
Jacksonville, Fla.....	199.1	196.0	199.7	198.8	189.3	190.3	194.8	199.1	182.5	180.7	181.5	170.6	150.8	95.8
Kansas City, Mo.....	180.0	180.7	182.7	182.3	176.6	175.4	175.4	178.0	166.6	165.3	164.3	154.4	134.8	91.8
Knoxville, Tenn. ¹	223.0	216.8	223.4	225.2	213.9	216.4	220.4	226.5	201.5	197.8	203.7	186.4	165.6	94.0
Little Rock, Ark.....	189.8	188.1	193.0	190.8	182.9	182.4	184.8	186.3	172.3	168.6	167.8	159.3	139.1	94.0
Los Angeles, Calif.....	193.8	196.7	195.7	195.5	194.1	194.3	195.1	198.1	182.8	176.5	175.1	171.2	154.8	94.6
Louisville, Ky.....	183.4	180.0	183.6	183.9	176.6	177.7	178.6	184.9	167.4	163.7	163.1	155.2	135.6	92.1
Manchester, N. H.....	190.3	185.1	184.0	186.8	177.5	183.6	186.7	185.6	176.9	170.0	168.7	161.5	144.4	94.9
Memphis, Tenn.....	205.1	201.6	204.6	205.1	198.6	200.2	206.0	207.3	191.0	185.3	187.5	174.6	153.6	89.7
Milwaukee, Wis.....	190.8	186.6	185.4	186.9	180.1	178.0	179.7	184.1	174.8	170.3	168.3	167.4	144.3	91.1
Minneapolis, Minn.....	182.6	179.0	179.6	181.3	174.6	174.0	180.2	181.7	177.6	167.9	163.3	160.9	137.5	95.0
Mobile, Ala.....	196.9	197.0	201.6	199.6	188.7	189.2	191.0	193.8	182.8	176.4	175.5	163.8	149.8	95.1
Newark, N. J.....	184.1	181.1	183.3	185.3	176.5	178.5	180.4	181.7	179.5	170.9	170.0	164.9	147.9	95.6
New Haven, Conn.....	186.4	180.5	178.5	181.4	174.1	177.3	179.1	179.0	173.9	166.8	163.7	160.6	140.4	93.7
New Orleans, La.....	203.7	201.1	204.0	204.3	199.1	199.7	202.4	207.4	196.0	190.7	188.8	180.6	157.6	97.6
New York, N. Y.....	187.9	184.8	187.3	189.5	182.1	183.5	186.1	188.6	186.7	178.8	171.0	168.9	149.2	95.8
Norfolk, Va.....	198.0	198.8	200.5	199.8	191.6	191.3	195.0	197.0	189.3	177.4	176.6	164.5	146.0	93.6
Omaha, Nebr.....	187.4	183.8	183.2	183.2	178.3	178.2	182.9	184.1	178.2	171.0	167.8	161.4	139.5	92.5
Peoria, Ill.....	201.7	195.1	198.3	197.2	183.9	187.1	186.2	190.3	188.9	183.8	183.5	172.2	151.3	93.1
Philadelphia, Pa.....	187.1	183.4	181.9	185.8	177.2	179.7	181.8	181.6	176.2	172.6	169.2	160.8	143.5	93.0
Pittsburgh, Pa.....	196.9	192.4	189.9	192.0	185.6	185.2	187.7	188.5	179.3	176.9	174.0	167.6	147.1	92.1
Portland, Maine.....	185.3	180.2	181.4	184.8	174.3	179.8	180.5	178.9	173.5	167.0	166.5	160.8	138.4	95.0
Portland, Ore.....	199.7	200.8	201.4	198.1	191.2	192.8	196.0	194.8	183.7	184.5	182.1	175.8	158.4	96.1
Providence, R. I.....	194.2	186.1	185.5	189.8	180.5	183.8	184.0	186.7	184.1	175.9	173.4	165.3	144.9	93.5
Richmond, Va.....	185.8	186.3	188.3	188.8	182.1	181.5	186.5	188.2	175.9	167.4	164.1	154.0	138.4	92.5
Rochester, N. Y.....	185.2	180.5	178.4	180.3	174.3	177.4	176.8	176.9	172.5	165.7	165.5	160.6	142.5	92.5
St. Louis, Mo.....	196.8	193.4	195.2	198.9	188.4	187.4	189.3	191.8	183.6	174.5	175.5	169.7	147.4	93.8
St. Paul, Minn.....	178.5	176.8	176.6	179.1	172.3	173.1	177.7	180.1	176.2	164.6	161.6	159.0	137.3	94.3
Salt Lake City, Utah.....	192.6	189.3	189.2	186.8	184.1	183.9	190.6	191.9	180.6	175.4	171.8	166.4	151.7	94.6
San Francisco, Calif.....	196.9	199.9	201.7	199.5	195.4	200.6	204.6	205.2	191.4	186.5	180.6	172.1	155.5	93.8
Savannah, Ga.....	209.4	208.2	208.9	213.1	203.1	203.8	205.8	209.4	192.2	190.9	187.2	180.1	158.5	96.7
Scranton, Pa.....	194.9	189.2	188.0	188.9	182.6	180.9	185.2	185.6	182.5	174.0	171.2	168.4	144.0	92.1
Seattle, Wash.....	193.3	193.9	196.4	194.3	187.4	189.6	195.9	194.6	186.1	175.6	170.0	167.1	151.6	94.0
Springfield, Ill.....	203.5	200.2	201.7	202.3	194.5	193.4	191.6	194.9	181.7	179.8	181.1	174.1	150.1	94.1
Washington, D. C.....	190.9	187.8	189.4	190.3	181.3	183.7	186.1	186.8	180.6	174.7	169.9	164.8	145.5	94.1
Wichita, Kans. ¹	197.3	195.3	198.7	196.6	190.1	193.3	195.5	198.5	189.2	186.6	183.2	174.8	154.4	94.1
Winston-Salem, N. C. ¹	194.4	191.8	197.2	199.2	189.6	192.6	195.3	200.0	184.3	179.2	177.4	164.6	145.3	94.1

¹ June 1940=100.

TABLE D-6: Average Retail Prices and Indexes of Selected Foods

Commodity	Average price June 1947	Indexes 1935-39=100													
		June 1947	May 1947	April 1947	March 1947	February 1947	January 1947	December 1946	November 1946	October 1946	September 1946	August 1946	July 1946	June 1946	August 1939
Cereals and bakery products:															
Cereals:															
Flour, wheat..... 5 pounds.....	Cents 49.1	189.9	191.5	187.5	171.9	164.2	161.4	158.9	157.4	155.5	149.1	147.7	135.3	123.4	82.1
Macaroni..... pound.....	19.6	135.7	135.7	134.1	133.2	132.9	132.1	131.5	129.5	128.8	124.5	115.4	110.8	108.1	94.8
Corn flakes..... 11 ounces.....	12.8	135.3	132.7	129.6	129.4	128.2	127.4	126.4	124.9	123.6	122.7	118.2	111.3	98.7	92.
Corn meal..... pound.....	9.1	178.1	176.6	177.5	175.4	176.3	178.1	176.0	175.3	168.7	163.1	156.3	151.5	132.6	90.
Rollod oats ¹ 20 ounces.....	14.1	127.7	126.1	124.5	122.1	122.0	122.1	121.7	121.6	120.7	120.2	119.2	118.9	118.7	(²)
Bakery products:															
Bread, white..... pound.....	12.5	146.5	146.1	146.4	141.7	137.0	136.3	135.2	135.5	136.0	136.6	135.7	125.6	124.1	93.2
Bread, whole-wheat..... do.....	13.8	150.0	147.8	146.8	142.0	136.9	136.9	137.0	135.4	136.0	137.1	135.3	127.1	127.0	95.9
Bread, rye..... do.....	14.7	153.8	153.4	153.2	147.4	141.6	140.4	139.9	138.6	140.1	138.2	137.4	131.7	130.7	97.1
Vanilla cookies..... do.....	40.0	173.3	172.2	172.4	169.0	167.1	168.1	166.1	161.3	146.3	147.4	147.0	133.8	128.8	(³)
Soda crackers..... do.....	24.7	146.7	146.7	146.8	146.7	146.3	146.4	145.7	143.8	132.1	128.6	122.4	111.6	111.2	93.2
Meats:															
Beef:															
Round steak..... do.....	78.0	230.9	205.2	202.3	201.7	194.6	195.4	190.3	194.2	180.8	186.7	186.7	180.9	123.3	102.7
Rib roast..... do.....	62.1	216.0	197.6	195.7	196.5	192.5	194.4	192.0	194.2	175.2	181.2	181.2	173.6	118.2	97.4
Chuck roast..... do.....	50.6	225.7	204.4	203.1	206.7	201.0	207.7	206.3	209.8	191.7	195.3	195.3	193.3	129.3	97.1
Liver ¹ do.....	62.2	169.5	159.3	154.5	150.7	146.1	145.1	143.7	145.8	136.1	139.5	139.5	128.4	105.7	(⁴)
Hamburger ¹ do.....	43.9	142.0	130.7	129.8	130.5	130.0	133.2	134.1	139.5	123.7	129.6	129.6	132.6	90.6	(⁴)
Veal:															
Cutlets..... do.....	84.2	211.4	197.0	194.0	195.4	188.7	182.5	174.9	176.5	162.2	167.2	167.2	161.8	113.6	101.1
Pork:															
Chops..... do.....	74.2	225.3	214.2	202.0	219.0	191.7	182.1	175.2	201.8	185.0	185.0	185.0	155.5	113.8	90.9
Bacon, sliced..... do.....	72.3	189.9	181.2	189.9	202.1	180.8	187.7	197.3	199.6	165.7	165.7	165.7	134.3	109.7	80.7
Ham, sliced ¹ do.....	93.1	156.1	150.1	151.1	155.7	140.2	139.2	140.2	142.2	129.3	129.3	129.3	108.7	85.2	(⁵)
Ham, whole..... do.....	66.9	227.7	217.5	224.9	241.2	210.1	215.1	222.1	229.0	200.0	200.0	200.0	165.0	123.2	92.8
Salt pork..... do.....	39.6	189.5	192.3	211.7	211.5	185.4	202.8	240.9	252.5	203.0	203.0	203.0	144.1	109.3	69.0
Lamb:															
Leg..... do.....	66.3	233.0	215.0	212.9	217.8	213.7	216.3	208.7	218.9	197.3	196.8	199.3	177.4	143.8	95.7
Rib chops..... do.....	76.4	218.1	202.0	198.1	199.5	193.0	192.5	187.1	190.1	176.3	176.6	178.0	164.0	132.8	101.6
Poultry: Roasting chickens..... do.....	55.0	182.3	179.6	177.1	178.3	176.5	185.8	189.4	188.9	225.3	192.8	175.2	178.2	162.8	94.6
Fish:															
Fish (fresh, frozen)..... do.....	(³)	225.1	227.4	237.6	248.2	242.1	262.6	262.6	264.7	263.2	247.9	243.6	240.9	222.9	98.8
Salmon, pink..... 16-ounce can.....	41.1	313.8	308.4	301.1	289.2	279.5	267.9	253.7	237.6	183.9	183.3	195.0	193.8	187.0	97.4
Dairy products:															
Butter..... pound.....	70.7	194.3	190.8	202.2	227.7	209.3	218.4	251.4	243.4	264.6	227.8	209.8	221.2	167.6	84.0
Cheese..... do.....	55.2	211.4	213.9	234.7	233.7	234.9	242.9	251.6	266.3	249.8	230.9	219.8	196.1	158.1	92.3
Milk, fresh (delivered)..... quart.....	18.5	151.8	152.9	156.6	158.4	159.5	165.5	166.7	164.6	164.6	159.0	158.4	155.3	134.7	97.1
Milk, fresh (store)..... do.....	17.6	155.1	156.4	160.1	161.6	163.9	170.3	171.4	169.8	167.8	160.8	160.0	158.0	137.1	96.3
Milk, evaporated..... 14½-ounce can.....	12.6	176.6	179.8	186.0	193.5	193.9	195.1	195.2	193.6	185.1	177.7	175.7	161.8	145.3	93.9
Eggs: Eggs, fresh..... dozen.....	63.4	183.0	178.9	176.3	174.7	169.9	181.7	201.1	201.6	214.6	193.3	173.6	161.0	147.1	90.7
Fruits and vegetables:															
Fresh fruits:															
Apples..... pound.....	15.5	295.9	286.0	277.1	258.0	246.5	239.5	237.8	228.9	218.7	213.7	231.4	268.3	280.0	81.6
Bananas..... do.....	15.1	250.0	251.2	248.2	246.4	244.8	243.1	240.4	226.7	182.6	182.9	187.1	197.8	180.3	97.3
Oranges..... dozen.....	42.8	150.8	153.5	155.6	152.9	133.6	133.2	150.2	172.5	202.3	202.3	195.3	203.4	179.6	96.9
Fresh vegetables:															
Beans, green..... pound.....	17.8	164.3	192.7	262.5	327.2	233.1	172.1	184.0	209.1	166.8	160.5	150.0	168.4	154.2	61.7
Cabbage..... do.....	7.8	204.5	241.7	167.7	172.4	172.8	164.8	140.9	133.4	134.3	141.2	138.2	127.3	144.7	103.2
Carrots..... bunch.....	9.1	170.1	171.5	156.8	171.0	167.9	196.6	178.8	176.0	175.8	166.3	160.9	171.6	169.8	84.9
Lettuce..... head.....	11.5	139.6	181.7	141.0	154.3	187.8	165.8	153.6	160.4	139.8	148.0	139.9	141.1	142.2	97.6
Onions..... pound.....	7.4	180.1	180.3	158.0	124.8	121.7	119.4	115.6	110.0	113.0	114.0	125.5	169.7	203.1	86.8
Potatoes..... 15 pounds.....	87.7	244.5	219.5	207.4	189.2	178.3	177.8	171.2	169.8	169.9	177.5	188.4	212.7	209.4	91.9
Spinach..... pound.....	10.9	151.2	154.7	174.2	206.8	189.8	193.9	161.0	146.4	149.6	164.6	181.5	166.4	134.4	118.4
Sweetpotatoes..... do.....	11.4	223.8	200.0	198.8	200.1	203.2	202.7	196.7	183.5	178.9	196.0	235.6	263.2	242.5	116.7
Canned fruits:															
Peaches..... No. 2½ can.....	32.4	168.1	166.7	167.9	167.7	167.4	167.6	167.0	165.2	160.0	156.1	150.9	153.4	143.8	92.3
Pineapple..... do.....	(⁶)	150.7	152.5	152.1	150.9	150.4	150.8	148.4	145.6	135.4	133.2	124.4	125.3	119.3	96.0
Grapefruit juice ¹ No. 2 can.....	10.7	78.5	79.0	80.1	80.7	82.5	86.6	97.2	108.6	112.1	112.5	110.6	108.9	106.1	(⁴)
Canned vegetables:															
Beans, green ¹ do.....	16.6	115.0	115.6	115.2	114.2	110.8	109.7	109.4	109.0	103.8	101.2	99.1	96.7	94.7	(⁹)
Corn..... do.....	18.1	145.5	145.6	145.6	145.5	145.4	145.0	143.9	139.0	129.9	123.9	119.9	119.8	118.7	88.6
Peas..... do.....	15.7	120.0	123.2	123.8	122.6	121.3	120.9	120.3	119.0	115.8	112.7	110.4	107.0	104.3	89.8
Tomatoes..... do.....	20.3	224.7	230.4	230.9	232.8	233.6	236.3	233.8	222.0	194.8	184.6	169.1	141.0	139.1	92.5
Dried fruits: Prunes..... pound.....	24.9	245.5	254.7	257.9	259.3	257.4	253.8	252.7	234.3	196.8	181.8	178.1	176.1	172.4	94.7
Dried vegetables: Navy beans..... do.....	20.9	284.2	284.2	283.2	285.3	284.5	288.2	287.0	273.7	198.5	188.3	187.5	172.8	170.0	83.0
Beverages:															
Coffee..... do.....	45.5	181.1	189.1	189.7	187.0	182.7	177.9	175.8	166.8	165.5	160.7	123.5	122.9	122.3	93.3
Tea..... ¼ pound.....	24.3	139.3	138.7	138.6	138.0	138.4	138.5	138.3	138.3	139.4	139.3	138.3	138.6	138.2	100.3
Fats and oils:															
Lard..... pound.....	27.1	180.8	191.8	258.4	257.7	215.7	216.6	233.8	350.3	171.8	187.6	255.8	156.4	125.6	65.2
Shortening other than lard:															
In cartons..... do.....	34.4	235.6	252.9	288.8	272.4	253.7	252.5	254.9	282.8	152.5	157.0	182.6	142.7	138.4	81.3
In other containers..... do.....	45.4	219.2	236.6	247.6	222.0	214.2	213.9	213.9	216.8	130.4	127.0	139.9	121.7	119.2	93.9
Salad dressing..... pint.....	38.4	158.6	173.2	173.6	166.2	162.2	163.1	162.4	158.3	124.9	122.7	129.0	118.5	116.6	(⁴)
Oleomargarine..... pound.....	40.3	221.5	227.3	251.2	241.5	230.8	232.8	234.1	233.7	149.7	145.6	167.3	138.8	133.0	93.6
Peanut butter..... do.....	36.4	178.5	178.0	176.6	174.4	173.9	174.2	173.8	172.7	171.3	169.8	168.1	167.5	165.7	93.2
Sugar and sweets:															
Sugar..... do.....	8.7	181.0	180.6	180.6	179.9	179.2	176.9	175.3	169.8	167.0	139.1	138.8	138.0	135.7	95.6
Corn sirup ¹ 24 ounces.....	18.4	120.0	119.7	120.0	118.9	120.9	122.7	126.0	128.8	124.7	121.1	113.5	104.1	102.4	(⁹)

TABLE D-7: Indexes of Wholesale Prices,¹ by Group of Commodities for Selected Periods
[1926=100]

Year and month	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	Household furnishings	Miscellaneous commodities	Raw materials	Semi-manufactured articles	Manufactured products	All commodities except farm products	All commodities except farm products and foods
1913: Average.....	69.8	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	55.1	93.1	68.8	74.9	69.4	69.0	70.0
1914: July.....	67.3	71.4	62.9	69.7	55.3	55.7	79.1	52.9	77.9	56.7	88.1	67.3	67.8	66.9	65.7	65.7
1918: November.....	136.3	150.3	128.6	131.6	142.6	114.3	143.5	110.8	178.0	99.2	142.3	138.8	162.7	130.4	131.0	129.9
1920: May.....	167.2	169.8	147.3	193.2	188.3	159.8	155.5	164.4	173.7	143.3	176.5	163.4	253.0	157.8	165.4	170.6
1929: Average.....	95.3	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	97.5	93.9	94.5	93.3	91.6
1932: Average.....	64.8	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	55.1	59.3	70.3	68.3	70.2
1939: Average.....	77.1	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	70.2	77.0	80.4	79.5	81.3
August.....	78.0	61.0	67.2	92.7	67.8	72.6	93.2	89.6	74.2	85.6	73.3	66.5	74.5	79.1	77.9	80.1
1940: Average.....	78.6	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	71.9	79.1	81.6	80.8	83.0
1941: Average.....	87.3	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	83.5	86.9	89.1	88.3	89.0
December.....	93.6	94.7	90.5	114.8	91.8	78.4	103.3	107.8	90.4	101.1	87.6	92.3	90.1	94.6	93.3	93.7
1942: Average.....	98.8	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	100.6	92.6	98.6	97.0	95.5
1943: Average.....	103.1	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	112.1	92.9	100.1	98.7	96.9
1944: Average.....	104.0	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	113.2	94.1	100.8	99.6	98.5
1945: Average.....	105.8	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	116.8	95.9	101.8	100.8	99.7
August.....	105.7	126.9	106.4	118.0	99.6	84.8	104.7	117.8	95.3	104.5	94.8	116.3	95.5	101.8	100.9	99.9
1946: Average.....	121.1	148.9	130.7	137.2	116.3	90.1	115.5	132.6	101.4	111.6	100.3	134.7	110.8	116.1	114.9	109.5
June.....	112.9	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	126.3	105.7	107.3	106.7	105.6
July.....	124.7	157.0	140.2	141.2	118.1	90.3	113.3	132.1	99.3	111.9	101.3	141.7	110.2	118.9	117.5	109.5
August.....	129.1	161.0	149.0	138.9	124.0	94.4	114.0	132.7	98.4	112.6	102.0	145.7	111.9	123.9	121.9	111.6
September.....	124.0	154.3	131.9	141.6	125.7	94.3	114.2	133.8	98.4	113.6	102.1	141.4	115.0	117.2	117.2	112.2
October.....	134.1	165.3	157.9	142.4	128.6	94.2	125.8	134.8	99.9	115.3	104.0	148.7	118.2	129.6	127.1	115.8
November.....	139.7	169.8	165.4	172.5	131.6	94.5	130.2	145.5	118.9	118.2	106.5	153.4	129.1	134.7	132.9	120.7
December.....	140.9	168.1	160.1	176.7	134.7	96.1	134.7	157.8	125.7	120.2	108.9	153.2	136.2	135.7	134.8	124.7
1947: January.....	141.5	165.0	156.2	175.1	136.6	97.7	138.0	169.7	128.1	123.3	110.3	152.1	138.8	136.7	136.1	127.6
February.....	144.5	170.4	162.0	173.8	138.0	97.9	137.9	174.8	129.3	124.6	110.9	154.9	142.1	139.7	138.6	128.5
March.....	149.5	182.6	167.6	174.6	139.6	100.7	139.9	177.5	132.2	125.8	115.3	163.2	145.9	143.3	142.1	131.1
April.....	147.7	177.0	162.4	166.4	139.2	103.4	140.3	178.8	133.2	127.8	115.7	160.1	144.5	141.9	141.0	131.8
May.....	146.9	175.7	159.8	165.6	138.9	103.3	141.4	177.0	127.1	128.8	116.1	158.6	143.2	141.7	140.4	131.7
June.....	147.8	177.9	161.8	168.0	138.9	103.9	142.6	175.2	120.2	129.2	115.8	160.2	144.2	142.3	141.0	131.8

¹ BLS wholesale price data, for the most part, represent prices in primary markets. They are prices charged by manufacturers or producers or are prices prevailing on organized exchanges. The weekly index is calculated from one-day-a-week prices; the monthly index from an average of these prices.

The indexes currently are computed by the fixed base aggregate method, with weights representing quantities produced for sale in 1929-31. (For a detailed description of the method of calculation see "Revised Method of Calculation of the Bureau of Labor Statistics Wholesale Price Index", in the Journal of the American Statistical Association, December 1937.)

Because of past differences in the method of computation the weekly and monthly indexes should not be compared directly. The weekly index is

useful only to indicate week-to-week changes and to provide later data on price movements. It is not revised to take account of more complete reports.

Mimeographed tables are available, upon request to the Bureau, giving monthly indexes for major groups of commodities since 1890 and for sub-groups since 1913. Weekly indexes have been prepared since 1932.

² Includes current motor vehicle prices. The rate of production of motor vehicles in October 1946 exceeded the monthly average rate of civilian production in 1941, and in accordance with the announcement made in September 1946, the Bureau introduced current prices for motor vehicles in the October calculations. During the war motor vehicles were not produced for general civilian sale and the Bureau carried April 1942 prices forward in each computation through September 1946.

TABLE D-8: Indexes of Wholesale Prices¹ by Group of Commodities, by Weeks

[1926=100]

[Not directly comparable with monthly data. See footnote 1, table D-7]

Week ended	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals	Household furnishings	Miscellaneous commodities	Raw materials	Semi-manufactured articles	Manufactured products	All commodities except farm products	All commodities except farm products and foods
1947																
May 3.....	146.7	174.6	162.7	166.7	138.0	104.0	140.7	178.5	128.6	128.6	115.4	159.4	142.2	142.2	140.6	131.8
10.....	146.7	176.3	161.1	166.7	138.0	104.0	140.7	178.6	127.2	128.6	114.9	160.1	142.0	141.9	140.2	131.7
17.....	147.0	176.9	161.1	166.4	138.5	104.1	141.8	177.4	125.9	129.4	115.9	160.2	143.2	142.2	140.5	132.1
24.....	146.9	177.2	160.3	166.4	138.3	104.3	141.8	177.0	126.9	129.4	116.5	160.3	142.6	142.1	140.4	132.2
31.....	147.4	178.4	161.6	166.5	138.5	104.1	142.3	178.0	126.4	129.5	116.1	161.1	143.1	142.5	140.7	132.3
June 7.....	147.9	179.5	163.1	166.6	138.5	104.4	142.5	177.5	124.7	129.5	115.9	161.8	142.5	142.9	141.0	132.2
14.....	147.6	178.3	162.4	167.0	138.5	104.4	142.3	176.1	124.4	129.6	116.0	161.2	142.3	142.9	141.0	132.1
21.....	147.8	178.7	162.6	169.4	138.4	104.5	141.5	176.3	124.3	131.0	115.8	161.5	142.7	142.9	141.1	132.1
28.....	147.6	179.0	162.2	170.0	138.4	104.5	141.4	175.4	123.2	131.0	115.8	161.6	142.1	142.7	140.8	132.0
July 5.....	148.0	179.5	164.6	171.7	138.4	105.1	141.6	175.2	121.5	131.0	115.4	162.6	142.5	142.8	141.2	132.1
12.....	148.3	178.2	165.8	173.3	138.3	105.8	141.6	175.4	117.5	131.0	114.6	162.0	142.2	143.7	141.8	132.1
19.....	150.3	182.4	168.0	172.7	138.4	107.1	142.9	174.8	117.9	131.4	115.7	165.2	144.4	145.1	143.3	132.9
26.....	150.6	182.0	167.1	173.6	138.6	108.9	143.6	174.8	117.9	131.3	116.4	166.0	145.3	145.0	143.7	133.7

¹ See footnote 1, table D-7.

TABLE D-9: Indexes of Wholesale Prices¹ by Group and Subgroup of Commodities

[1926=100]

Group and subgroup	1947						1946								1939
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	Aug.	
All commodities.....	147.8	146.9	147.7	149.5	144.5	141.5	140.9	139.7	134.1	124.0	129.1	124.7	112.9	75.0	
Farm products.....	177.9	175.7	177.0	182.6	170.4	165.0	168.1	169.8	165.3	154.3	161.0	157.0	140.1	61.0	
Grains.....	206.0	202.4	199.8	203.3	171.1	162.6	163.0	165.4	174.2	170.6	169.0	181.4	151.8	51.5	
Livestock and poultry.....	200.9	198.7	199.2	216.0	201.5	189.6	194.7	197.4	174.6	150.4	177.6	162.9	137.4	66.0	
Other farm products.....	155.3	153.5	156.4	155.8	150.5	149.7	152.5	153.3	156.1	151.1	147.8	145.7	137.5	60.1	
Foods.....	161.8	159.8	162.4	167.6	162.0	156.2	160.1	165.4	157.9	131.9	149.0	140.2	112.9	67.2	
Dairy products.....	140.9	138.8	148.8	157.6	161.8	164.6	180.0	182.0	185.5	169.1	161.8	156.9	127.3	67.9	
Cereal products.....	149.2	151.7	154.1	150.4	141.3	139.9	139.5	136.1	128.5	127.4	124.7	124.9	101.7	71.9	
Fruits and vegetables.....	145.2	144.3	142.2	141.5	134.2	131.6	134.5	139.5	122.5	115.5	120.4	130.0	136.1	58.5	
Meats.....	208.6	203.0	196.7	207.3	199.5	183.4	188.2	202.8	191.4	131.3	198.1	169.9	110.1	73.7	
Other foods.....	139.7	138.4	147.6	152.8	146.0	141.1	139.0	141.4	136.2	115.5	114.9	109.4	98.1	60.3	
Hides and leather products.....	168.0	165.6	166.4	174.6	173.8	175.1	176.7	172.5	142.4	141.6	138.9	141.2	122.4	92.7	
Shoes.....	172.6	172.2	172.1	171.5	171.5	170.6	169.9	162.9	145.2	144.8	140.1	140.4	129.5	100.8	
Hides and skins.....	187.1	177.7	178.1	192.2	191.4	198.5	216.5	221.0	153.0	151.5	155.8	169.3	121.5	77.2	
Leather.....	157.1	154.5	158.0	183.7	181.1	181.6	185.0	178.1	138.5	138.5	133.3	133.2	110.7	84.0	
Other leather products.....	138.3	138.3	137.7	137.7	137.1	140.3	123.6	123.5	118.6	115.8	115.8	115.2	115.2	97.1	
Textile products.....	138.9	138.9	139.2	139.6	138.0	136.6	134.7	131.6	128.6	125.7	124.0	118.1	109.2	67.8	
Clothing.....	133.9	133.9	133.0	133.0	132.7	132.4	129.8	127.9	125.5	122.9	122.8	120.5	120.3	81.5	
Cotton goods.....	193.8	193.0	194.7	196.6	193.7	184.6	181.6	174.7	172.9	166.6	160.0	148.6	139.4	65.5	
Hosiery and underwear.....	100.8	100.8	100.8	100.8	100.0	99.3	96.9	89.3	88.8	88.7	87.7	76.3	75.8	61.5	
Rayon.....	37.0	37.0	37.0	37.0	37.0	33.8	33.8	32.0	30.2	30.2	30.2	30.2	30.2	28.5	
Silk.....	68.4	67.9	69.4	73.2	80.2	101.2	103.2	115.0	125.7	126.5	134.8	126.7	(2)	44.3	
Woolen and worsted goods.....	129.2	129.2	129.1	127.5	121.9	120.8	119.0	117.7	116.6	113.9	112.8	112.7	112.7	75.5	
Other textile products.....	173.8	176.1	175.8	175.1	170.1	169.9	168.1	161.3	130.6	126.7	121.7	113.5	112.3	63.7	
Fuel and lighting materials.....	103.9	103.3	103.4	100.7	97.9	97.7	96.1	94.5	94.2	94.3	94.4	90.3	87.8	72.6	
Anthracite.....	112.7	112.2	113.9	114.9	114.8	114.7	113.7	113.5	113.5	113.5	113.4	114.5	106.1	72.1	
Bituminous coal.....	145.6	145.1	145.0	143.6	143.3	142.6	138.9	137.4	137.2	137.0	136.7	136.1	132.8	96.0	
Coke.....	157.3	155.7	155.4	155.2	155.1	152.5	147.5	147.5	147.5	147.5	147.0	147.5	133.5	104.2	
Electricity.....	(2)	(2)	64.3	64.3	65.7	64.9	65.8	65.2	64.1	64.7	63.9	65.6	67.2	75.8	
Gas.....	(2)	85.0	84.0	84.9	84.3	80.8	83.1	84.4	80.8	80.6	79.5	80.7	79.6	86.7	
Petroleum and products.....	87.5	86.8	86.3	81.7	76.6	76.5	75.8	73.4	73.1	73.0	72.8	65.1	64.0	51.7	
Metals and metal products.....	142.6	141.4	140.3	139.9	137.9	138.0	134.7	130.2	125.8	114.2	114.0	113.3	112.2	93.2	
Agricultural implements.....	118.2	117.8	116.6	116.8	117.6	117.5	117.1	112.5	108.7	108.6	108.5	107.2	107.0	93.5	
Farm machinery.....	119.7	119.2	118.0	118.2	119.0	119.0	118.6	113.8	109.9	109.8	109.7	108.7	108.4	94.7	
Iron and steel.....	131.4	128.6	127.6	126.9	125.0	123.9	117.4	114.0	113.7	113.5	113.3	111.3	110.1	95.1	
Motor vehicles.....	149.4	149.3	148.8	149.2	149.3	151.3	151.0	148.2	143.6	(2)	(2)	(2)	(2)	92.5	
Nonferrous metals.....	142.9	143.9	141.0	139.0	131.3	130.5	129.3	118.4	101.8	101.4	101.4	102.7	99.2	74.6	
Plumbing and heating.....	119.1	120.0	118.2	117.9	117.1	117.0	114.9	107.2	107.2	107.2	106.3	106.0	106.0	79.3	
Building materials.....	175.2	177.0	178.8	177.5	174.8	169.7	157.8	145.5	134.8	133.8	132.7	132.1	129.9	89.6	
Brick and tile.....	134.7	134.5	134.5	132.4	132.3	132.2	130.0	129.1	127.8	127.7	126.0	122.5	121.3	90.5	
Cement.....	114.3	114.0	114.0	112.3	109.9	108.3	106.9	107.0	106.5	106.5	105.8	104.0	102.6	91.3	
Lumber.....	266.1	269.4	273.5	269.3	263.6	249.9	227.2	192.1	178.9	178.2	177.6	177.3	176.0	90.1	
Paint and paint materials.....	163.9	169.2	175.5	176.1	173.9	171.2	155.4	151.3	119.2	116.7	113.9	114.9	108.6	82.1	
Plumbing and heating.....	119.1	120.0	118.2	117.9	117.1	117.0	114.9	107.2	107.2	107.2	106.3	106.0	106.0	79.3	
Structural steel.....	127.7	127.7	127.7	127.7	127.7	127.7	120.1	120.1	120.1	120.1	120.1	120.1	120.1	107.3	
Other building materials.....	145.1	144.8	143.7	143.5	141.5	139.0	131.8	125.3	122.5	121.4	120.9	119.9	118.4	89.5	
Chemicals and allied products.....	120.2	127.1	133.2	132.2	129.3	128.1	125.7	118.9	99.9	98.4	98.4	99.3	96.4	74.2	
Chemicals.....	118.7	118.7	119.5	114.5	113.8	112.7	111.8	106.9	98.8	98.6	98.4	98.5	98.0	83.8	
Drug and pharmaceutical materials.....	156.1	173.6	181.0	182.7	182.5	181.7	181.2	152.8	111.5	110.3	110.1	112.6	109.4	77.1	
Fertilizer materials.....	101.8	102.5	101.2	101.8	99.2	99.9	95.1	96.3	91.9	90.2	94.4	88.2	82.7	65.5	
Mixed fertilizers.....	96.8	96.7	96.7	96.3	96.3	95.5	93.6	91.1	90.5	90.0	87.7	86.6	86.6	73.1	
Oils and fats.....	139.2	179.9	220.1	231.5	214.3	210.6	203.0	191.0	111.1	103.3	102.5	114.2	102.1	40.6	
Housefurnishing goods.....	129.2	128.8	127.8	125.8	124.6	123.3	120.2	118.2	115.3	113.6	112.6	111.9	110.4	85.6	
Furnishings.....	137.2	136.9	135.2	131.4	129.6	128.4	126.3	124.4	121.3	119.4	118.5	117.3	114.5	90.0	
Furniture.....	120.9	120.3	120.0	120.0	119.5	118.2	113.9	111.8	109.2	107.5	106.6	106.4	106.1	81.1	
Miscellaneous.....	115.8	116.1	115.7	115.3	110.9	110.3	108.9	106.5	104.0	102.1	102.0	101.3	98.5	73.3	
Automobile tires and tubes.....	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	60.5	
Cattle feed.....	253.3	237.4	208.9	238.4	178.6	181.7	193.8	210.8	217.2	201.8	221.1	246.3	197.8	68.4	
Paper and pulp.....	154.2	154.3	152.5	145.1	143.4	141.9	136.4	127.7	124.6	121.9	119.6	117.1	115.6	80.0	
Rubber, crude.....	37.1	45.6	52.0	52.9	52.9	51.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2	34.9	
Other miscellaneous.....	121.7	122.1	123.3	122.2	118.8	118.1	117.0	113.3	108.2	106.5	105.0	101.9	101.0	81.3	

¹ See footnote 1, table D-7.² Not available.³ See footnote 2, table D-7.

E: Work Stoppages

TABLE E-1: Work Stoppages Due to Labor-Management Disputes¹

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year	In effect during month	Number	Percent of estimated working time
1935-39 (average).....	2,862	-----	1,130,000	-----	16,900,000	0.27
1945.....	4,750	-----	3,470,000	-----	38,000,000	.47
1946.....	4,985	-----	4,600,000	-----	116,000,000	1.43
1946: June.....	388	758	181,000	455,000	4,580,000	.75
July.....	563	910	228,000	408,000	3,970,000	.58
August.....	560	965	227,000	425,000	3,900,000	.56
September.....	499	853	356,000	499,000	4,880,000	.77
October.....	516	848	307,000	467,000	6,220,000	.85
November.....	344	677	435,000	707,000	4,980,000	.77
December.....	168	402	76,400	500,000	3,130,000	.46
1947: January ²	320	475	105,000	165,000	1,375,000	.2
February ³	290	475	75,000	150,000	1,240,000	.2
March ⁴	330	525	100,000	165,000	1,100,000	.2
April ⁵	460	625	600,000	650,000	7,750,000	1.1
May ⁶	425	650	200,000	625,000	5,700,000	.8
June ⁷	350	600	475,000	625,000	3,750,000	.5

¹ All known work stoppages, arising out of labor-management disputes, involving six or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "man-days idle" and "workers involved" cover all workers made idle in establishments directly involved in a stoppage. They do not measure the indirect

or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

² Preliminary estimates. Figures for early months of 1947 revised but not final.

F: Building and Construction

TABLE F-1: Estimated Construction Expenditures, by Type of Construction¹

Type of construction	Estimated expenditures (in millions)													
	1947							1946						
	July ²	June ³	May ⁴	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	Total
Total construction.....	\$1,325	\$1,235	\$1,115	\$1,028	\$954	\$913	\$906	\$1,054	\$1,151	\$1,243	\$1,237	\$1,223	\$1,145	\$11,094
New construction ⁵	1,139	1,059	953	876	826	795	839	905	987	1,070	1,066	1,056	982	9,890
Private construction.....	850	799	720	662	648	634	666	711	745	788	800	809	767	7,739
Residential building (nonfarm).....	415	382	342	306	285	284	300	320	335	347	356	347	324	3,183
Nonresidential building (nonfarm) ⁶	253	250	243	240	247	260	275	296	308	318	315	321	317	3,350
Industrial.....	132	135	139	142	146	152	159	166	171	171	167	159	149	1,689
Commercial.....	74	70	60	55	57	62	69	80	86	93	95	107	116	1,114
All other.....	47	45	44	43	44	46	47	50	51	54	53	55	52	547
Farm construction.....	60	50	40	30	20	10	10	10	20	40	50	60	50	350
Public utilities.....	122	117	95	86	96	80	81	85	82	83	79	81	76	856
Public construction.....	289	260	233	214	178	161	173	194	242	282	266	247	215	2,151
Residential building.....	6	6	9	16	24	33	39	51	68	66	54	42	32	387
Nonresidential building (except military and naval facilities).....	48	44	41	41	36	32	33	23	27	32	35	32	30	319
Industrial facilities ⁷	2	2	3	4	3	3	5	5	7	9	9	7	6	84
All other.....	46	42	38	37	33	29	28	18	20	23	26	25	24	235
Military and naval facilities.....	16	15	15	15	12	12	12	16	17	20	16	18	14	188
Highways.....	135	117	95	75	48	34	37	57	76	99	93	91	81	706
Other public.....	84	78	73	67	58	50	52	47	54	65	68	64	58	551
Federal ⁸	45	40	35	29	25	23	24	23	27	32	32	30	28	270
State and local ⁹	39	38	38	38	33	27	28	24	27	33	36	34	30	281
Minor building repairs.....	186	176	162	152	128	118	127	149	164	173	171	167	163	1,804
Residential (nonfarm) ¹⁰	63	60	54	47	36	33	32	35	43	47	47	47	48	521
Nonresidential (nonfarm) ¹⁰	65	62	58	55	52	50	55	60	63	66	69	70	70	753
Farm construction ¹⁰	58	54	50	50	40	35	40	54	58	60	55	50	45	530

¹ Estimated construction expenditures represent the monetary value of the volume of work accomplished during the given period of time in continental United States. These figures should be differentiated from data on value of construction reported in the tables on urban building and Federal construction.

² Preliminary.

³ Revised.

⁴ Joint estimates by the Bureau of Labor Statistics, U. S. Department of Labor, and the Office of Domestic Commerce, Department of Commerce.

New construction includes expenditures for major additions and alterations.

⁵ Excludes nonresidential building by privately owned public utilities.

⁶ Expenditures for facilities to produce atomic bombs are excluded.

⁷ Mainly river, harbor, flood control, reclamation and power projects.

⁸ Includes water supply, sewage disposal, and miscellaneous public service enterprises.

⁹ Covers privately financed structural repairs of the type for which building permits are generally required.

¹⁰ Covers maintenance and repairs.

TABLE F-2: Value of Contracts Awarded and Force-Account Work Started on Federally Financed Construction, by Type of Project ¹

Period	Value (in thousands)									
	All types of projects	Airports ²	Buildings ³		Conservation and development		Electrification ⁴	Highways, streets, and roads	Water and sewage	All other types ⁵
			Residential	Nonresidential	Reclamation	River, harbor, and flood control				
1936.....	\$1, 533, 439	(⁶)	⁷ \$63, 465	⁸ \$497, 929	\$73, 797	\$115, 913	\$14, 878	\$511, 685	\$154, 807	\$100, 965
1939.....	1, 586, 604	\$4, 753	231, 071	438, 151	115, 612	109, 811	29, 775	355, 701	118, 131	183, 599
1942.....	7, 775, 497	579, 176	549, 472	5, 580, 917	150, 708	67, 087	32, 538	347, 988	152, 343	315, 268
1946.....	1, 450, 237	14, 859	435, 453	114, 203	169, 253	131, 152	4, 541	535, 784	13, 231	31, 761
1946: June.....	284, 353	4, 472	73, 758	31, 648	44, 670	23, 654	399	89, 680	2, 750	13, 322
July.....	186, 785	828	76, 768	12, 959	31, 002	5, 254	0	50, 766	8, 168	1, 040
August.....	143, 221	282	56, 495	1, 784	975	29, 661	0	52, 211	68	1, 745
September.....	97, 757	358	36, 475	6, 120	671	932	0	52, 666	418	117
October.....	94, 873	261	1, 147	2, 769	32, 909	2, 027	80	55, 480	169	31
November.....	45, 833	2, 012	294	8, 702	5, 263	635	233	28, 593	0	101
December.....	54, 100	122	294	7, 898	572	1, 908	3, 290	39, 966	0	50
1947: January.....	86, 167	2, 159	388	35, 903	2, 447	19, 231	475	25, 561	20	458
February.....	58, 508	237	2, 595	10, 442	5, 188	4, 220	589	34, 529	172	536
March.....	92, 913	340	5, 197	8, 942	13, 803	21, 082	414	42, 388	46	701
April.....	122, 646	387	7, 035	16, 512	7, 892	16, 912	312	72, 218	753	625
May ⁹	120, 696	1, 348	5, 968	14, 486	4, 443	27, 148	182	64, 242	2, 217	662
June ¹⁰	159, 906	3, 167	19, 423	29, 554	11, 690	36, 530	667	56, 358	1, 371	1, 146

¹ Covers projects financed wholly or partially from Federal funds. Excludes off-continent construction. Projects classified as secret by the military are excluded.

² Excludes hangars and other buildings, which are included, under building construction.

³ Includes additions, alterations, and repairs.

⁴ Data differ from those published previously due to the exclusion of loans granted by the Rural Electrification Administration.

⁵ Covers forestry, railroad construction and other types of heavy engineering projects, n. e. c.

⁶ Included in "All other types."

⁷ Includes nonresidential construction at the site of three Resettlement Administration projects for which a break-down of residential and non-residential costs is not available.

⁸ See footnote 7.

⁹ Revised.

¹⁰ Preliminary.

TABLE F-3: Estimated Permit Valuation ¹ of Urban Building Construction Scheduled To Be Started, by Class and by Source of Funds ²

[In thousands]

Period	All building construction			New residential building ³			New nonresidential building			Additions, alterations, and repairs		
	Total	Non-Federal	Federal	Total	Non-Federal		Total	Non-Federal	Federal	Total	Non-Federal	Federal
					Private	Public						
1942.....	\$2,704,239	\$1,066,092	\$1,638,147	\$915,079			\$313,336	\$1,510,688	\$222,908	\$1,287,690	\$278,472	\$241,351
1946.....	4,728,080	4,290,600	437,480	2,501,162	\$2,147,256	\$54,788	299,118	1,457,142	1,415,071	42,071	769,776	728,273
1946: May.....	416,483	360,248	56,235	266,229	213,590	0	52,639	90,415	90,365	50	59,839	56,293
June.....	411,512	347,480	64,032	242,760	188,787	8,810	45,163	106,200	104,502	1,698	62,552	54,191
July.....	413,758	348,475	65,283	237,781	183,537	9,060	45,184	110,030	105,362	4,668	65,947	59,576
August.....	424,653	350,754	73,899	263,847	194,962	25,390	43,495	92,199	92,188	11	68,607	63,604
September.....	347,022	316,304	30,718	193,498	173,775	0	19,723	94,671	89,707	4,964	58,853	52,822
October.....	337,351	324,509	12,842	193,991	184,198	8,441	1,352	85,259	83,986	1,273	58,101	56,325
November.....	272,745	263,253	9,492	149,863	149,581	0	282	81,507	73,091	8,416	41,375	40,581
December.....	229,809	221,059	8,750	109,101	109,101	0	0	78,514	70,792	7,722	42,194	41,166
1947: January.....	265,583	249,886	15,697	132,444	125,180	7,264	0	83,506	76,522	6,984	49,633	48,184
February.....	277,060	269,286	7,774	139,793	139,793	0	0	86,376	79,562	6,814	50,891	49,931
March.....	382,344	372,565	9,779	207,967	206,381	1,586	0	109,887	102,830	7,057	64,490	63,354
April ⁴	440,289	429,276	11,013	241,815	239,866	0	1,949	123,558	115,920	7,638	74,916	73,490
May ⁵	427,406	418,614	8,792	227,947	227,947	0	0	126,734	120,201	6,533	72,725	70,466
First 5 months of 1946.....	2,291,230	2,118,766	172,464	1,110,321	963,315	3,088	143,918	808,762	795,443	13,319	372,147	360,008
First 5 months of 1947 ⁶	1,792,683	1,739,628	53,055	949,966	939,167	8,850	1,949	530,061	495,035	35,026	312,656	305,426

¹ Includes value of Federal construction contracts awarded and estimates for building to be started in urban places which do not issue permits.

² Estimates of non-Federal (private and State and local government) urban building construction are based upon building permit reports received from places containing about 85% of the urban population of the United States; estimates of Federally financed projects are compiled from notifications of construction contracts awarded which are obtained from other Federal

agencies. Urban, as defined by the Bureau of the Census, covers all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of incorporated civil divisions.

³ Includes value of dormitories, hotels, and other nonhousekeeping residential buildings in addition to housekeeping units shown in table 7.

⁴ Revised.

⁵ Preliminary.

TABLE F-4: Estimated Number and Permit Valuation¹ of New Dwelling Units Scheduled To Be Started in Urban Areas,² by Type and Source of Funds

Period	Number of new family-dwelling units						Valuation (in thousands)					
	All dwellings	Publicly financed	Privately financed				All dwellings	Publicly financed	Privately financed			
			Total	1-family	2-family ¹	Multi-family ²			Total	1-family	2-family ¹	Multi-family ²
1942.....	280,838	95,946	184,892	138,908	15,747	30,237	\$895,511	\$296,933	\$598,578	\$478,665	\$42,629	\$77,284
1946.....	528,775	98,737	430,018	358,126	24,271	47,621	2,445,773	331,887	2,113,886	1,830,395	102,754	180,737
1946: May.....	58,245	14,688	43,557	35,825	3,283	4,449	262,671	51,131	211,540	182,052	13,464	16,024
June.....	52,062	13,932	38,130	31,388	2,156	4,586	237,391	50,190	187,201	160,038	9,204	17,959
July.....	52,178	14,212	37,966	31,170	1,980	4,816	230,008	48,720	181,288	157,833	8,218	15,237
August.....	55,106	16,446	38,660	32,921	1,943	3,796	257,755	64,285	193,470	168,555	8,654	16,261
September.....	42,563	7,519	35,044	29,335	2,050	3,659	191,455	18,777	172,678	150,795	8,960	12,923
October.....	37,401	1,334	36,067	29,576	1,809	4,592	193,385	9,792	183,593	156,482	8,290	18,821
November.....	28,661	122	28,539	23,747	1,594	3,198	149,579	282	149,297	126,948	7,397	14,952
December.....	21,369	0	21,369	17,409	977	2,923	108,284	0	108,284	92,385	4,447	11,452
1947: January.....	25,383	1,084	24,299	20,537	1,496	2,266	131,771	7,264	124,507	108,433	6,342	9,732
February.....	27,074	0	27,074	22,156	1,615	3,303	138,443	0	138,443	118,613	6,375	13,455
March.....	37,649	491	37,158	30,615	2,448	4,095	206,511	1,586	204,925	176,084	10,763	18,078
April ³	42,862	328	42,534	35,214	3,142	4,178	240,390	1,949	238,441	202,847	13,478	22,116
May ⁴	41,138	0	41,138	33,670	3,085	4,383	224,950	0	224,951	189,254	14,068	21,629
First 5 months of 1946 ⁵	239,415	45,172	194,243	162,520	11,672	20,051	1,077,916	139,841	938,075	817,359	47,584	73,132
First 5 months of 1947 ⁶	174,106	1,903	172,203	142,192	11,786	18,225	942,066	10,799	931,267	795,231	51,026	85,010

¹ Includes value of Federal construction contracts awarded and estimates for building to be started in urban places which do not issue permits.

² Starts data for 1946 cover only those family dwelling units in the Federal temporary re-use housing program which were provided by dismantling temporary war structures and their re-erection at new sites. Starts data

for 1947 cover new temporary housing projects outside of the Federal temporary re-use program.

³ Includes 1- and 2-family dwellings with stores.

⁴ Includes multifamily dwelling units with stores.

⁵ Revised.

⁶ Preliminary.

TABLE F-5: Estimated Permit Valuation¹ of New Nonresidential Building Scheduled To Be Started in Urban Areas,² by General Type and by Source of Funds

Year and month	Valuation (in thousands of dollars)													
	New nonresidential buildings		Industrial buildings ³		Commercial buildings ⁴		Community buildings ⁵		Government buildings ⁶		Public works and utility buildings ⁷		All other buildings ⁸	
	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal	Total (including Federal)	Non-Federal
1946.....	1,457,142	1,415,071	396,923	395,320	669,498	669,498	190,098	167,327	12,042	3,624	101,241	92,033	87,340	87,340
1946: May.....	90,415	90,365	24,634	24,634	40,061	40,061	11,695	11,695	448	398	6,638	6,638	6,939	6,939
June.....	106,200	104,502	34,118	34,063	34,840	34,840	19,602	19,448	1,817	328	9,714	9,714	6,109	6,109
July.....	110,030	105,362	32,009	32,009	44,777	44,777	19,871	15,271	357	288	5,864	5,864	7,153	7,153
August.....	92,199	92,188	21,779	21,779	38,851	38,851	15,453	15,453	212	201	7,489	7,489	8,415	8,415
September.....	94,671	89,707	33,262	33,110	30,939	30,939	15,276	10,464	492	492	6,447	6,447	8,255	8,255
October.....	85,259	83,986	21,123	21,123	35,264	35,264	14,049	12,793	170	153	6,422	6,422	8,231	8,231
November.....	81,507	73,091	20,944	20,944	23,267	23,267	16,168	7,752	321	321	14,585	14,585	6,222	6,222
December.....	78,514	70,792	22,665	22,665	24,328	24,328	15,643	12,336	157	157	11,382	6,968	4,338	4,338
1947: January.....	83,506	76,522	22,889	22,889	31,439	31,439	16,323	9,339	257	257	7,719	7,719	4,879	4,879
February.....	86,376	79,562	20,079	20,080	30,785	30,785	17,727	11,033	659	539	10,136	10,136	6,989	6,989
March.....	109,887	102,830	26,813	26,813	38,780	38,780	26,310	19,322	388	319	10,665	10,665	6,931	6,931
April.....	123,558	115,920	22,907	22,907	45,458	45,458	24,461	21,598	7,399	2,624	13,883	13,883	9,450	9,450
May ⁹	120,734	120,201	25,366	25,366	47,863	47,863	28,155	24,015	3,246	853	12,157	12,157	9,947	9,947
First 5 months of 1946.....	808,762	795,443	211,023	209,557	437,232	437,232	74,036	73,810	8,516	1,684	39,337	34,543	38,617	38,617
First 5 months of 1947 ¹	530,061	495,035	118,055	118,055	194,325	194,325	112,976	85,307	11,949	4,592	54,560	54,560	38,196	38,196

¹ Includes value of Federal construction contracts awarded and estimates for building to be started in urban places which do not issue permits. Urban, as defined by the Bureau of the Census, covers all incorporated places of 2,500 population or more in 1940 and, by special rule, a small number of incorporated civil divisions.

² Estimates of non-Federal (private and State and local government) building in all urban areas are based upon building permit reports received from places containing about 85 percent of the urban population of the country; estimates of Federally financed projects are compiled from notifications of construction contracts awarded, which are obtained from other Federal agencies.

³ Includes factories, navy yards, army ordnance plants, bakeries, ice plants, industrial warehouses, and other buildings at the site of these and similar production sites.

⁴ Includes amusement and recreation buildings, stores and other mercantile buildings, public garages, gasoline and service stations, etc.

⁵ Includes churches, hospitals, and other institutional buildings; schools, libraries, etc.

⁶ Includes Federal, State, county, and municipal buildings, such as post offices, city halls, fire and police stations, army barracks, and naval stations, etc.

⁷ Includes railroads, bus and airport buildings, roundhouses, radio stations, gas and electric plants, public comfort stations, etc.

⁸ Includes private garages, sheds, stables and barns, and other building not elsewhere classified.

⁹ Preliminary.

TABLE F-6: Estimated Number of Dwelling Units or Equivalent Living Accommodations Started and Completed in Nonfarm Areas

	Grand total	New family-dwelling units					Converted family units, dormitories, and trailers ³	Grand total	New family-dwelling units					Converted family units, dormitories, and trailers ³
		Total	Permanent ¹			Temporary ²			Total	Permanent ¹			Federal temporary re-use program ⁴	
			Total	Private	Public					Total	Private	Public		
	Started								Completed					
1946: Total	1,001,800	778,000	670,500	662,500	8,000	107,500	223,800	642,300	476,400	437,800	437,800	(*)	38,600	165,900
January	51,000	42,600	37,500	36,900	600	5,100	8,400	22,100	15,900	15,900	0	0	6,200	
February	55,500	49,800	42,400	42,400	0	7,400	5,700	25,000	17,360	17,300	0	0	7,700	
March	88,200	70,500	62,000	62,000	0	8,500	17,700	27,300	18,700	18,700	0	0	8,600	
April	98,600	80,300	67,000	67,000	0	13,300	18,300	30,200	21,000	21,000	0	0	9,200	
May	105,700	83,400	67,100	67,100	0	16,300	22,300	34,700	25,100	25,100	0	0	9,600	
June	94,300	79,900	64,100	62,800	1,300	15,800	14,400	42,300	30,600	30,600	0	0	11,700	
July	106,500	78,500	62,600	61,300	1,300	15,900	28,000	50,000	36,700	36,700	0	0	13,300	
August	108,500	81,700	65,400	61,900	3,500	16,300	26,800	60,600	43,400	43,400	0	0	17,200	
September	102,800	66,000	57,600	57,600	0	8,400	36,800	81,100	49,700	49,700	0	0	31,400	
October	78,600	58,200	57,800	56,500	1,300	400	20,400	86,300	55,500	55,500	0	0	30,800	
November	61,800	47,800	47,700	47,700	0	100	14,000	87,800	61,200	61,200	0	0	26,600	
December	50,300	39,300	39,300	39,300	0	(*)	11,000	94,900	62,700	62,700	(*)	0	32,200	
1947: January	52,800	40,100	40,100	39,000	1,100	0	12,700	97,400	78,600	62,600	62,600	0	16,000	18,800
February	53,000	44,100	44,100	44,100	0	0	8,900	91,700	75,800	60,300	60,300	(*)	15,500	15,900
March	67,400	58,400	58,400	58,400	0	0	9,000	87,300	72,700	57,700	57,700	0	15,000	14,600
April	80,200	68,700	68,700	68,700	0	0	11,500	82,600	65,900	59,500	59,400	100	6,400	16,700
May	81,500	72,800	72,500	72,500	0	200	8,800	78,700	62,500	59,900	59,900	0	2,600	16,200
June ⁵	84,700	77,200	75,200	75,000	200	2,000	7,500	74,900	66,800	63,000	62,800	200	3,800	8,100

¹ Covers both conventional and prefabricated units.² See footnote 2, table 4.³ These figures are presented in terms of equivalent living accommodations, that is, two dormitory accommodations are counted as one dwelling unit. They cover: family dwelling units provided by the conversion of existing structures at the original site; dormitory accommodations whether built at new locations or converted at the original site; and trailers.⁴ Covers only those family dwelling units in the Federal temporary re-use housing program which were provided by dismantling temporary war structures and their re-erection at new sites.⁵ Monthly data not available.⁶ Less than 50 units.⁷ Monthly figures include completed new family dwelling units in the Federal temporary re-use program provided by dismantling temporary war structures and their re-erection at new sites, which, if they could be segregated, would be shown in column 6.⁸ Preliminary.⁹ Excludes dwelling units provided by the conversion of existing structures by private owners as estimates for this segment are not available. During May 1947 a total of 1,400 such units were started and 4,000 were completed.

Source: Estimates are by the Bureau of Labor Statistics, except in the case of estimates for privately financed conversions and Federal temporary re-use units which are from the Office of the Housing Expediter, and estimates for trailers which are from the Bureau of the Census.

TABLE F-7: Estimated Number and Average Construction Cost of Privately Financed Dwelling Units Started in 29 Leading Industrial Areas ¹

Industrial area ²	Number of dwelling units started												
	1947				1946								
	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.
Atlanta.....	487	415	345	365	435	460	590	655	565	675	775	615	695
Boston.....	587	830	530	245	325	450	495	355	385	655	550	555	570
Buffalo.....	345	240	205	155	170	170	280	200	345	240	580	270	365
Chicago.....	1,342	1,190	700	720	1,105	1,485	1,410	1,225	2,005	2,300	2,220	1,565	1,695
Cleveland.....	403	610	400	300	410	515	770	735	670	555	460	655	650
Columbus.....	250	275	185	180	140	205	370	225	285	320	170	315	255
Dallas.....	842	540	505	275	245	355	425	675	375	540	520	480	630
Denver.....	354	270	270	275	380	330	565	525	635	680	735	730	670
Detroit.....	1,615	1,485	810	615	780	1,195	1,195	1,355	1,500	1,425	1,455	2,010	1,745
Fort Worth.....	457	400	455	210	180	250	330	340	395	335	340	365	375
Hartford.....	258	160	65	65	110	110	95	120	140	140	130	170	145
Indianapolis.....	260	230	130	160	150	165	270	260	475	270	240	240	225
Knoxville.....	166	125	95	95	120	155	315	210	220	225	295	300	315
Los Angeles.....	5,096	5,040	5,675	3,855	4,630	4,095	3,995	4,980	5,135	4,255	4,390	5,910	4,440
Memphis.....	508	380	415	225	220	420	355	270	365	465	380	355	370
Milwaukee.....	387	120	105	195	220	360	425	305	475	310	545	625	475
Minneapolis-St. Paul.....	418	195	210	210	410	495	580	585	715	600	780	765	835
New York-Newark-Jersey City ⁴	1,900	2,495	1,810	2,865	2,030	3,270	3,640	4,305	4,545	3,440	3,905	3,700	3,895
Philadelphia-Camden.....	896	805	375	350	385	855	775	730	1,005	1,200	1,315	1,135	1,495
Pittsburgh.....	849	455	185	280	370	380	390	720	530	500	495	510	605
Sacramento.....	330	315	325	350	175	280	265	365	365	300	330	350	480
San Francisco.....	1,664	1,790	1,505	1,570	945	1,365	985	1,610	1,520	1,405	1,960	1,760	1,545
Seattle-Tacoma.....	(⁵)	670	410	375	430	360	700	850	900	755	860	920	965
Springfield-Holyoke.....	135	65	40	30	85	85	70	100	120	115	135	150	160
St. Louis.....	671	495	405	310	325	330	490	660	630	700	495	795	845
Syracuse.....	124	50	10	5	15	110	95	125	135	140	45	100	135
Toledo ⁶	95	105	60	40	45	65	110	135	115	(⁵)	(⁵)	(⁵)	(⁵)
Washington, D. C.....	1,296	1,230	985	720	705	870	1,230	800	1,020	785	1,065	1,155	1,030
Worcester.....	208	120	30	15	55	90	95	155	150	195	195	215	150
Youngstown ⁴	(⁵)	(⁵)	60	70	55	100	65	170	100	145	120	160	120
Average construction cost per dwelling unit started ³													
Atlanta.....	\$5,600	\$5,400	\$5,900	\$5,500	\$5,100	\$5,000	\$5,100	\$5,100	\$5,200	\$5,600	\$5,100	\$4,900	\$4,700
Boston.....	7,200	6,800	6,000	7,700	7,400	7,300	6,700	8,500	7,400	7,500	7,500	7,300	6,900
Buffalo.....	8,600	8,000	7,900	6,900	6,900	6,800	7,300	7,200	7,200	6,000	6,100	5,800	7,200
Chicago.....	8,500	8,700	8,700	8,500	7,700	7,800	8,700	8,100	7,700	7,800	7,600	7,600	8,100
Cleveland.....	9,300	9,200	8,800	8,800	9,100	9,100	8,400	8,400	8,300	8,000	10,500	9,000	9,600
Columbus.....	8,000	7,900	8,600	7,700	7,900	7,700	7,300	7,000	6,300	7,000	7,000	7,100	6,800
Dallas.....	5,600	5,700	5,600	5,600	6,400	6,500	6,100	6,000	6,800	6,600	6,300	6,400	6,800
Denver.....	5,700	5,700	5,600	5,400	5,700	5,800	5,700	5,700	5,700	5,700	5,400	7,300	5,700
Detroit.....	8,600	8,500	9,400	9,800	7,300	7,700	8,400	7,600	6,900	6,300	6,400	5,000	7,700
Fort Worth.....	4,800	4,500	4,300	4,000	5,900	4,200	3,200	3,000	3,200	3,500	4,500	8,100	5,500
Hartford.....	7,500	7,600	8,100	9,000	8,400	7,400	7,200	7,400	7,000	7,300	7,100	8,000	7,300
Indianapolis.....	6,200	5,600	6,700	5,900	5,300	5,400	4,900	5,300	5,600	6,500	5,800	5,300	5,400
Knoxville.....	4,600	4,300	4,900	4,800	4,700	4,300	4,700	4,400	3,900	3,700	4,300	5,000	5,000
Los Angeles.....	6,800	6,700	6,700	6,600	6,700	6,700	6,800	6,600	6,900	6,600	6,200	6,000	5,900
Memphis.....	4,300	4,200	4,900	4,300	4,500	4,900	4,500	4,400	4,600	4,400	5,300	4,600	3,700
Milwaukee.....	7,700	8,600	7,800	7,300	8,100	7,100	7,800	7,500	6,100	7,500	8,000	7,600	7,900
Minneapolis-St. Paul.....	8,200	8,200	7,600	9,000	7,900	8,000	7,600	7,200	7,200	7,100	7,600	7,100	7,400
New York-Newark-Jersey City ⁴	9,100	7,400	7,400	7,000	8,100	7,400	7,600	7,700	7,000	7,300	6,900	7,400	7,900
Philadelphia-Camden.....	6,900	6,700	6,700	7,100	7,300	6,700	6,700	6,800	6,800	6,700	6,700	6,700	6,900
Pittsburgh.....	6,500	7,300	7,100	7,300	7,400	7,600	7,100	6,300	5,900	6,300	5,300	7,400	6,400
Sacramento.....	5,400	3,900	4,000	4,600	4,400	4,700	4,700	5,100	5,400	5,800	4,800	4,200	4,500
San Francisco.....	7,500	8,100	8,000	7,900	7,700	7,600	7,400	6,600	6,700	7,800	7,300	7,200	7,800
Seattle-Tacoma.....	(⁵)	6,100	6,600	5,000	6,300	6,900	5,400	5,800	6,000	6,000	5,900	5,900	6,000
Springfield-Holyoke.....	7,000	6,700	6,900	6,600	7,100	6,400	6,300	6,500	5,000	6,400	6,100	5,100	6,000
St. Louis.....	6,800	6,900	6,600	6,600	6,800	8,900	6,700	5,400	6,000	7,100	4,600	6,300	6,100
Syracuse.....	8,400	8,300	7,900	9,700	9,200	9,000	6,900	5,900	6,800	6,100	6,500	7,700	7,300
Toledo ⁶	8,100	7,900	8,200	7,300	8,000	7,100	6,700	6,900	7,500	(⁵)	(⁵)	(⁵)	(⁵)
Washington, D. C.....	8,500	8,300	8,100	7,600	7,500	7,700	6,600	6,600	7,900	7,600	6,700	8,000	7,500
Worcester.....	5,800	6,600	5,700	7,900	5,800	6,400	7,200	6,000	6,400	5,300	7,600	6,600	6,700
Youngstown ⁴	(⁵)	(⁵)	6,700	7,100	6,900	6,000	8,800	6,900	6,700	7,000	7,000	7,000	6,900

¹ Covers all privately financed new family dwelling units. Excludes trailers, dormitories, barracks, converted units, and all federally-financed residential building.

² Industrial areas cover entire counties or groups of counties surrounding the central city or cities.

³ Based on contractor's estimates. Represents the cost of labor and materials, and all subcontracted work. Excludes land and development costs.

⁴ Includes permanent units financed by the New York City Housing Authority.

⁵ Data not available.

⁶ Toledo area now being surveyed instead of Youngstown area.

Source: These data were compiled by the U. S. Bureau of Labor Statistics in connection with its housing statistics program. Data on private residential building started are based on reports from building-permit issuing offices and from building contractors and others in nonpermit issuing areas as well as in permit issuing places in the areas shown. Building permit data are corrected for lapsed permits and lag between issuance of permits and the start of construction, by follow-up of construction jobs for which permits have been issued.

TABLE F-8: Estimated Number and Construction Cost of New ¹ Urban and Rural Nonfarm Dwelling Units Started, by Source of Funds

Year and month	Number of new dwelling units started									Estimated construction cost ¹ (in thousands)		
	All units			Privately financed			Publicly financed			Total	Privately financed	Publicly financed
	Total nonfarm areas	Urban areas	Rural nonfarm areas	Total nonfarm areas	Urban areas	Rural nonfarm areas	Total nonfarm areas	Urban areas	Rural nonfarm areas			
1925 ²	947,000	752,000	185,000	937,000	752,000	185,000	-----	-----	-----	\$4,475,000	\$4,475,000	-----
1933 ³	93,000	45,000	48,000	93,000	45,000	48,000	-----	-----	-----	285,446	285,446	-----
1941 ⁴	715,200	439,582	275,618	619,460	369,465	249,995	95,740	70,117	25,623	2,852,778	2,530,765	\$322,013
1944 ⁵	169,400	114,875	54,525	138,779	93,173	45,606	30,621	21,702	8,919	560,715	483,231	77,484
1946.....	776,200	493,963	282,237	662,526	395,642	266,884	113,674	98,321	15,353	4,103,251	3,713,776	389,475
1946: May.....	83,400	55,671	27,729	67,031	40,967	26,064	16,369	14,704	1,665	437,981	381,195	56,786
June.....	79,800	51,569	28,231	62,799	37,637	25,162	17,001	13,932	3,069	408,698	343,579	65,119
July.....	78,500	50,202	28,298	61,346	35,994	25,352	17,154	14,208	2,946	398,644	335,249	63,395
August.....	81,300	52,506	28,794	61,902	36,060	25,842	19,398	16,446	2,952	412,378	338,779	73,599
September.....	65,800	41,159	24,641	57,592	33,640	23,952	8,208	7,519	689	344,438	323,770	20,668
October.....	58,200	34,638	23,562	56,492	33,304	23,188	1,708	1,334	374	327,920	317,304	10,616
November.....	47,800	28,733	19,067	47,678	28,611	19,067	122	122	0	276,179	275,897	282
December.....	39,300	23,662	15,638	39,268	23,662	15,606	32	0	32	231,943	231,870	73
1947: January.....	40,100	24,611	15,489	38,998	23,527	15,471	1,102	1,084	18	235,105	227,682	7,423
February.....	44,100	25,774	18,326	44,100	25,774	18,326	0	0	0	244,755	244,755	0
March.....	59,000	33,674	25,326	58,425	33,183	25,242	575	491	84	328,720	326,456	2,264
April.....	69,500	38,858	30,642	68,724	38,530	30,194	776	328	448	393,234	388,155	5,079
May.....	72,700	39,376	33,324	72,544	39,376	33,168	156	0	156	418,008	416,875	1,133

¹ Covers both permanent and temporary new family dwelling units. Includes those family dwelling units in the Federal temporary reuse housing program provided by dismantling temporary war structures and their re-erection at new sites.

² Private construction costs are based on permit valuations, adjusted for understatement of costs shown on permit applications. Public construction

costs are based on contract values or estimated construction costs for individual projects.

³ Housing peak year.

⁴ Depression, low year.

⁵ Recovery peak year prior to war-time limitations.

⁶ Last full year under war-time control.